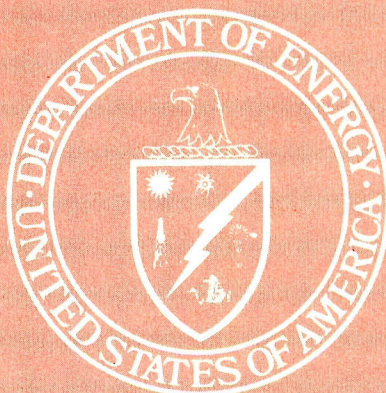


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Feature articles appearing in previous issues:

Energy Consumption—March 1975

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The Price of Crude Oil—June 1975

U.S. Coal Resources and Reserves—July 1975

Propane, A National Energy Resource—
September 1975

Short-Term Energy Supply and Demand Fore-
casting at FEA—October 1975

Curtailments of Natural Gas Service—January
1976

Home Heating Conservation Alternatives and the
Solar Collector Industry—March 1976

Trends in United States Petroleum Imports—
September 1976

Crude Oil Entitlements Program—January 1977

Motor Gasoline Supply and Demand—July 1977

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Short-Term Petroleum Supply and Demand

by

Office of Energy Source Analysis

Office of Applied Analysis

Energy Information Administration

This article was prepared in conjunction with Volume II of the 1977 *Energy Information Administration Annual Report to Congress* which presents analyses and projections of U.S. energy supply, demand, prices, and their impacts. The petroleum supply and demand short-term forecasts, with a discussion of those forecasts and the factors influencing them, are presented in this article.

Certain assumptions were made as a starting point for this analysis. Most importantly, energy supply/demand was examined in the short-term assuming three alternative macroeconomic assumptions. The balance of this section contains a discussion of the three macroeconomic forecasts developed by Data Resources, Inc. (DRI)—CEASPIRIT, TRENDLONG 0977, and CYCLELONG 0977—which are used to generate the high-, medium-, and low-energy demand variations.

The forecasts may be characterized as follows as they affect the short-term forecasts:

- TRENDLONG (Projection Series C, or medium demand) is a mid-range economic forecast that depicts a situation of relatively stable long-term economic growth. The economy approaches full employment of labor and capital during the early 1980's. By 1980 unemployment is assumed to be 6.0 percent, consistent with a real gross national product (GNP) growth rate of 4.3 percent per year. Economic stability is achieved through complementary monetary and fiscal policies and an absence of exogenous shocks to the economy.
- CEASPIRIT (Projection Series A and B, or high demand) is a relatively stable economic growth forecast developed by DRI in conjunction with the staff at the Council of Economic Advisors (CEA). It reflects the CEA near-term economic targets which were current as of early 1977, but should not be construed as a CEA assessment of likely economic developments. CEASPIRIT is more optimistic than TRENDLONG, particularly through the early 1980's. By 1980 the unemployment rate is projected to be only 5.1 percent with a real rate of growth of GNP of 5.5 percent per year.
- CYCLELONG (Projection Series D and E, or low demand) presents a future characterized by marked cyclical fluctuations. Destabilizing monetary and fiscal policies generate the instability and result in slower growth and higher rates of inflation than in TRENDLONG. Thus, while GNP grows at 4.2 percent per year (compared with 4.3 percent per year for TRENDLONG), to 1980, the unemployment rate reaches 6.2 percent (compared to 6.0 percent for TRENDLONG) in the same year.

While these gross magnitudes are not used directly in the forecasting models employed in this study, they are indicative of the differences in economic assumptions.

Projections

Currently, crude oil and other petroleum liquids account for about one-half of total U.S. energy consumption. Almost one-half of this amount (one-fourth of total U.S. energy consumption) is derived from foreign imports of petroleum liquids and refined petroleum products.

Domestic demand for refined products from 1976 to 1979 is projected to exhibit growth rates in a range from 4.1 percent per annum for Projection Series D and E (low demand) to 5.9 percent per annum for Projection Series A and B (high demand). These growth rates are significantly higher than the 2.9 percent rate observed from 1970 through 1976. Residual and distillate fuel oils show strong projected growth trends of 7.2 percent and 5.0 percent, respectively, for Projection Series C. The reaction to economic growth is significant: Projection Series A and B (high demand) growth rates are almost 40 percent higher for distillate and 86 percent higher for residual fuel oil than are those corresponding to Projection Series D and E (low demand). This growth occurs mainly in electric utility consumption and is largely the result of the substitution of fuel for curtailed natural gas supplies.

The annual average rate of growth in motor gasoline demand is insensitive to real income fluctuations and ranges rather narrowly from 2.7 percent to 3.2 percent in the low- and high-economic cases, respectively. This is consistent with the 1970-1976 historical growth rate of 3.2 percent.

The decline in domestic crude oil production since 1970 reversed for the first time in 1977; production is expected to continue to increase in 1978 and 1979 as a result of the Alaskan North Slope production. Delivery of North Slope crude oil, which averaged 300,000 barrels per day in 1977, is projected to average 1.1 million barrels per day in 1978 and 1.2 million barrels per day in 1979. The average annual rate of growth for domestic crude oil production in the 1976-1979 period is expected to be 3.1 percent compared to an average annual decrease of 2.8 percent in the 1970-1976 period as shown in Table 1. The total domestic supply of petroleum is expected to grow at an annual rate of 2.1 percent in 1976-1979 compared to an annual decline of 1.8 percent in 1970-1976.

The levels of domestic production, domestic consumption, and exports determine the level of petroleum imports to the United States. As shown in Table 2, the rate of growth in petroleum imports is expected to be less in the 1976-1979 period than in the 1970-1976 period even for Projection Series A and B (high demand). In the historical period, total imports grew at an annual rate of 13.5 percent compared to the projected annual growth rates ranging from 6.6 percent in Projection Series D and E (low demand) to 10.7 percent in Projection Series A and B (high demand) in the 1976-1979 period. There is a significant change in the composition of imports projected through 1979, with refined products gaining in importance, particularly for Projection Series A and B (high demand). Since refinery utilization is assumed to be running at a high level (90 percent of capacity) crude oil imports are constrained to grow at 8.6 percent in each case (see Tables 1 through 3). Therefore, all fluctuations in domestic demand would be felt in imported refined products. Hence, while the variation in the projections of total import growth runs from 6.6 percent to 10.7 percent, the variation in the projections of product import growth is much greater—from 1.1 percent to 15.7 percent over the 1976-1979 time frame for Projection Series D and E (low demand) and Projection Series A and B (high demand), respectively. These projections and comparisons are summarized in Tables 1 through 5.

Table 1
Projection Series C (Medium Demand)
Petroleum Supply/Demand
Balances

	Actual 1976	Preliminary 1977 ¹	1978	1979	Annual Growth Rates	
					1970- 1976	1976- 1979
	(Thousands of barrels per day)				(Percent)	
DOMESTIC SUPPLY						
Crude Oil	8,132	8,217	8,896	8,918	-2.8	3.1
Natural Gas Liquids	1,604	1,617	1,548	1,515	-0.6	-1.9
Refinery Gain	478	512	556	565	4.9	5.7
Other Supply	158 ²	-416 ³	38	38	NA	NA
Subtotal	10,372	9,930	11,038	11,036	-1.8	2.1
IMPORTS						
Crude Oil	5,287	6,565	6,544	6,774	26.0	8.6
Products	2,026	2,143	2,021	2,276	-0.6	4.0
Subtotal	7,313	8,708	8,565	9,050	13.5	7.4
Total Supply	17,685	18,638	19,603	20,086	2.8	4.3
Domestic Demand	17,462	18,422	19,403	19,886	2.9	4.4
Exports	223	216	200	200	-2.5	-3.6 ⁴
Total Demand	17,685	18,638	19,603	20,086	2.8	4.3
Refinery Capacity	15,692	16,651	17,155	17,435	4.2	3.6
(Utilization)	(85%)	(88%)	(90%)	(90%)	NA	NA
Crude Runs	13,416	14,612	15,440	15,692	3.6	5.4

NA = Not applicable.

¹ Preliminary data as of December 1977.

² Includes 58,000 barrels per day of crude and product supply from inventories, 76,000 barrels per day of unaccounted for crude supply, 14,000 barrels per day crude loss, and 38,000 barrels per day of other hydrocarbon supply.

³ Includes -543,000 barrels per day of crude and product supply from inventories, 91,000 barrels per day of unaccounted for crude supply, 14,000 barrels per day crude loss, and 50,000 barrels per day of other hydrocarbon supply.

⁴ Decline not modeled.

Table 2
Projection Series A and B (High Demand)
Petroleum Supply/Demand
Balances

	Actual 1976	Preliminary 1977 ¹	1978	1979	Annual Growth Rates	
					1970- 1976	1976- 1979
	(Thousands of barrels per day)				(Percent)	
DOMESTIC SUPPLY						
Crude Oil	8,132	8,217	8,896	8,918	-2.8	3.1
Natural Gas Liquids	1,604	1,617	1,548	1,515	-0.6	-1.9
Refinery Gain	478	512	556	565	4.9	5.7
Other Supply	158 ²	-416 ³	38	38	NA	NA
Subtotal	10,372	9,930	11,038	11,036	-1.8	2.1
IMPORTS						
Crude Oil	5,287	6,565	6,544	6,774	26.0	8.6
Products	2,026	2,143	2,165	3,137	-0.6	15.7
Subtotal	7,313	8,708	8,709	9,911	13.5	10.7
Total Supply	17,685	18,638	19,747	20,947	2.8	5.8
Domestic Demand	17,462	18,422	19,547	20,747	2.9	5.9
Exports	223	216	200	200	-2.5	-3.6 ⁴
Total Demand	17,685	18,638	19,747	20,947	2.8	5.8
Refinery Capacity	15,692	16,651	17,155	17,435	4.2	3.6
(Utilization)	(85%)	(88%)	(90%)	(90%)	NA	NA
Crude Runs	13,416	14,612	15,440	15,692	3.6	5.4

Note: See footnotes below.

Table 3
Projection Series D and E (Low Demand)
Petroleum Supply/Demand
Balances

	Actual 1976	Preliminary 1977 ¹	1978	1979	Annual Growth Rates	
					1970- 1976	1976- 1979
	(Thousands of barrels per day)				(Percent)	
DOMESTIC SUPPLY						
Crude Oil	8,132	8,217	8,896	8,918	-2.8	3.1
Natural Gas Liquids	1,604	1,617	1,548	1,515	-0.6	-1.9
Refinery Gain	478	512	556	565	4.9	5.7
Other Supply	158 ²	-416 ³	38	38	NA	NA
Subtotal	10,372	9,930	11,038	11,036	-1.8	2.1
IMPORTS						
Crude Oil	5,287	6,565	6,544	6,774	26.0	8.6
Products	2,026	2,143	1,981	2,094	-0.6	1.1
Subtotal	7,313	8,708	8,525	8,868	13.5	6.6
Total Supply	17,685	18,638	19,563	19,904	2.8	4.0
Domestic Demand	17,462	18,422	19,363	19,704	2.9	4.1
Exports	223	216	200	200	-2.5	-3.6 ⁴
Total Demand	17,685	18,638	19,563	19,904	2.8	4.0
Refinery Capacity	15,692	16,651	17,155	17,435	4.2	3.6
(Utilization)	(85%)	(88%)	(90%)	(90%)	NA	NA
Crude Runs	13,416	14,612	15,440	15,692	3.6	5.4

NA = Not applicable.

¹ Preliminary data as of December 1977.

² Includes 58,000 barrels per day of crude and product supply from inventories, 76,000 barrels per day of unaccounted for crude supply, 14,000 barrels per day crude loss, and 38,000 barrels per day of other hydrocarbon supply.

³ Includes -543,000 barrels per day of crude and product supply from inventories, 91,000 barrels per day of unaccounted for crude supply, 14,000 barrels per day crude loss, and 50,000 barrels per day of other hydrocarbon supply.

⁴ Decline not modeled.

Table 4
Petroleum Supply and Demand Comparisons
Percent Annual Growth Rates

	1970-1976	Projection Series C (Medium Demand) 1976-1979	Projection Series D and E (Low Demand) 1976-1979	Projection Series A and B (High Demand) 1976-1979
DOMESTIC SUPPLY				
Crude Oil	-2.8	3.1	3.1	3.1
Natural Gas Liquids	-0.6	-1.9	-1.9	-1.9
Refinery Gain	4.9	5.7	5.7	5.7
Subtotal	-1.8	2.1	2.1	2.1
IMPORTS				
Crude Oil	26.0	8.6	8.6	8.6
Products	-0.6	4.0	1.1	15.7
Subtotal	13.5	7.4	6.6	10.7
Total Supply	2.8	4.3	4.0	5.8
Domestic Demand	2.9	4.4	4.1	5.9
Exports	-2.5	-3.6	-3.6	-3.6
Total Demand	2.8	4.3	4.0	5.8
Refinery Capacity	4.2	3.6	3.6	3.6
Crude Runs	3.6	5.4	5.4	5.4

Table 5
Domestic Demand for Refined Petroleum Products by Series

	Actual 1976	Preliminary 1977 ¹	1978	1979	Annual Growth Rates	
	(Thousands of barrels per day)				1970- 1976	1976- 1979
					(Percent)	
PROJECTION SERIES C (MEDIUM DEMAND)						
Motor Gasoline	6,978	7,178	7,418	7,584	3.2	2.8
Distillate Fuel Oil	3,133	3,345	3,529	3,632	3.6	5.0
Residual Fuel Oil	2,801	3,048	3,370	3,449	4.1	7.2
Jet Fuels	988	1,037	979	976	1.6	-0.4
Other Products	3,562	3,814	4,107	4,245	1.8	6.0
Total Domestic Demand for All Refined Products	17,462	18,422	19,403	19,886	2.9	4.4
PROJECTION SERIES A AND B (HIGH DEMAND)						
Motor Gasoline	6,978	7,178	7,426	7,660	3.2	3.2
Distillate Fuel Oil	3,133	3,345	3,545	3,785	3.6	6.5
Residual Fuel Oil	2,801	3,048	3,495	3,906	4.1	11.7
Jet Fuels	988	1,037	982	980	1.6	-0.3
Other Products	3,562	3,814	4,099	4,416	1.8	7.4
Total Domestic Demand for All Refined Products	17,462	18,422	19,547	20,747	2.9	5.9
PROJECTION SERIES D AND E (LOW DEMAND)						
Motor Gasoline	6,978	7,178	7,415	7,566	3.2	2.7
Distillate Fuel Oil	3,133	3,345	3,521	3,597	3.6	4.7
Residual Fuel Oil	2,801	3,048	3,351	3,367	4.1	6.3
Jet Fuels	988	1,037	979	976	1.6	-0.4
Other Products	3,562	3,814	4,097	4,198	1.8	5.6
Total Domestic Demand for All Refined Products	17,462	18,422	19,363	19,704	2.9	4.1

¹ Preliminary data as of December 1977.

Sensitivities

Projections of demand for the three major refined products (gasoline, distillate fuel oil, and residual fuel oil) are sensitive to income, prices, and, for heating oils, weather. For each percentage point of additional growth in real national income over that assumed in Projection Series C (medium demand), annual demand for refined products increases by about 300,000 barrels per day. This would translate into increased imports of refined products, particularly residual fuel oil. The short-run refined product price elasticities imply that a 10-percent increase in real product prices would reduce total product demand by 1 to 2 percent, which would be about 200,000 to 400,000 barrels per day, given expected demand levels.

Unusual variation in weather conditions, as in the 1976-1977 winter, introduces a great deal of uncertainty in the projections of petroleum demand. Based on degree-day elasticities estimated on normal seasonal variations, 10 percent colder weather would increase fuel oil demand by approximately 150,000 barrels per day for nonelectric power generation use. This would be met through additional product imports if refinery production does not anticipate unseasonal conditions and if seasonal stocks are not adequate.

Comparison With Other Forecasts

Table 6 compares three recently completed forecasts of total domestic demand for refined products to Projection Series A-E. These forecasts include a U.S. Government projection prepared in the summer of 1977 for the Federal Energy Administration Gasoline Decontrol Report, the 1978 projections developed by the Independent Petroleum Association of America (IPAA), and those developed by the *Oil and Gas Journal*.¹ Projection Series A-E are higher than the other forecasts for 1978, but they bracket the FEA Gasoline Decontrol Report for 1979.

Table 6
Alternative Projections of Total Domestic Refined Product Demand
(Thousands of barrels per day)

	DOE					
	Projection Series C (Medium Demand)	Projection Series D and E (Low Demand)	Projection Series A and B (High Demand)	FEA Gasoline Decontrol— September 1977	Independent Petroleum Association of America	<i>Oil and Gas Journal</i>
1978	19,403	19,363	19,547	19,100	19,161	19,128
1979	19,886	19,704	20,747	20,200	NA	NA

NA=Not available.

The Gasoline Decontrol Report used the same procedures as those employed in the current analysis and assumed Projection Series A and B (high demand). The differences rest in the assumption, for the decontrol report, that product prices would grow in real terms, and that the National Energy Plan's proposed crude oil equalization tax would be passed, raising prices further. These price assumptions depressed aggregate product demand by about 550,000 barrels per day in 1979.

The rationale for abandoning the high price growth trajectories used in the decontrol report in favor of constant real prices for products used here is based in part on the observation that gasoline prices deflated by the consumer price index have declined over the past 2 years from post-embargo levels and that current DOE forecasting models using constant real world prices of crude oil project essentially flat real product prices over the 1979 period. This may be a transient phenomenon which will subsequently change. However, a realization of the price trajectory used in the earlier report would require substantial increments to current dollar product prices in the near term. It does not appear appropriate to assume that these increases will take place barring significant changes in OPEC or domestic pricing policies.

¹IPAA's forecast from *Oil and Gas Journal*, October 31, 1977, page 80; *Oil and Gas Journal* forecast from January 30, 1978, issue, page 123.

A key assumption in the IPAA and *Oil and Gas Journal* forecasts is that real GNP for 1978 will be 4.3 percent greater than for 1977. The DOE projections are based on real GNP growths for 1977-1978 of 4.6, 4.8, and 5.8 percent for the low-demand, mid-demand, and high-demand assumptions, respectively.

Notes on the Short-Term Projections

Changes in domestic petroleum production from the projected levels in 1978 and 1979 may come about as a result of transportation-related uncertainties concerning Alaskan North Slope crude. Any decrease in the North Slope production from expected levels would be compensated by a corresponding increase in petroleum imports.

The Strategic Petroleum Reserve imports of crude oil are not included in the supply and demand balances shown in Tables 1—3. These imports will be over and above the imports projected here to satisfy the domestic petroleum consumption, but would appear in the Bureau of Customs statistics as U.S. imports of crude oil.

Overview

Energy production in the United States during March 1978 averaged 156.2 trillion Btu per day (the equivalent of 26.9 million barrels per day of crude oil*), up 6.3 percent from the production rate in February, but 8.9 percent below the output for March 1977. The largest production increase during March was posted for coal (48.6 percent), as the 4-month-long strike by the United Mine Workers of America ended on the 27th of the month. Crude oil output increased 5.8 percent from its February level, but natural gas and nuclear production both declined, by 4.1 and 6.5 percent, respectively. For the first quarter of 1978, domestic energy production was down 9.2 percent from the output rate during the January-March period of 1977, with the following comparisons noted: crude oil, +5.4 percent; natural gas, -2.0 percent; coal, -46.3 percent; hydroelectric, +29.8 percent (estimated); and nuclear, +10.8 percent.

The United States consumed an average of 219.6 trillion Btu per day of energy (or 37.9 million barrels per day of crude oil equivalent*) during March 1978, 6.6 percent more than in March 1977. To a considerable extent, the increase in energy consumption was attributable to colder weather. (Heating degree-days for March 1978 were 35 percent greater than for March 1977.) Except for an 11.5-percent decline in coal consumption ascribed to the strike, energy use in March was notably higher as follows: refined petroleum products, +9.1 percent; natural gas, +11.6 percent; hydroelectric, +25.1 percent (estimated); nuclear, +9.4 percent. U.S. energy consumption for the first quarter of 1978 was 3.2 percent greater than for the comparable period in 1977.

U.S. imports of fossil fuels in March 1978 were lower than the previous year's level for the fifth consecutive month. March imports averaged 51.4 trillion Btu per day (equal to 8.9 million barrels per day of crude oil*), 10.7 percent below the March 1977 average. First quarter imports were down 13.6 percent from the 1977 level, with refined petroleum products imports recording the largest decline at 22.9 percent. Crude oil and natural gas imports were down by 10.2 and 4.3 percent, respectively.

Stocks of heating fuels were drawn down below year ago levels during March 1978, but crude oil stocks continued to compare favorably with 1977 levels. Distillate fuel oil stocks totaled 140.0 million barrels on March 31, about 2 million barrels below the March 31, 1977, level. Residual fuel oil stocks, at 66.8 million barrels, were more than 4 million barrels below their level a year earlier. On the other hand, crude oil stocks experienced a buildup of 4.5 million barrels in March, closing 46 million barrels higher than the March 31, 1977, total. Estimated inventories of bituminous coal and lignite were 82 million tons at month's end, compared with 123 million tons a year earlier. The volume of working gas** in underground natural gas storage reservoirs fell to 1.1 trillion cubic feet at the end of March, the lowest recorded level since DOE began collecting monthly storage data in September 1975.

According to a new nationwide Department of Energy survey, a gallon of leaded regular gasoline sold for an average of 61.6 cents at full serve stations during February 1978. Retail prices for other grades of gasoline in February were as follows: self serve unleaded regular, 57.1 cents per gallon; full serve leaded premium, 67.7 cents per gallon; and full serve unleaded regular, 65.7 cents per gallon.

World crude oil production averaged 58.0 million barrels per day in February 1978, 49 percent of which was produced by OPEC nations. In comparison, last February OPEC nations produced 54 percent of the total world crude output of 59.9 million barrels per day.

*One barrel of crude oil contains approximately 5.8 million Btu.

**Gas available for withdrawal.

		Domestic Production of Energy*	Imports of Fossil Fuels**	Domestic Consumption of Energy***
		Quadrillion Btu		
1972	TOTAL	62.937	11.563	R71.610
1973	TOTAL	62.373	14.519	74.551
1974	TOTAL	R61.154	14.114	R72.617
1975	January	R5.183	1.334	R6.928
	February	R4.778	1.093	R6.055
	March	R5.103	1.128	R6.268
	April	R5.044	0.971	5.685
	May	R5.131	1.030	5.368
	June	R4.982	1.027	R5.316
	July	R4.836	1.164	R5.551
	August	R4.927	1.220	5.634
	September	R4.879	1.272	R5.389
	October	R5.100	1.232	5.801
	November	R4.902	1.210	R5.748
	December	R5.080	1.255	6.821
	TOTAL	R59.946	13.935	R70.564
1976	January	R5.071	1.306	R7.183
	February	R4.853	1.223	R6.262
	March	R5.207	1.301	R6.256
	April	R4.934	1.246	R5.732
	May	R5.042	1.231	R5.661
	June	R5.036	1.389	R5.692
	July	R4.796	1.505	R5.884
	August	R4.951	1.417	R5.827
	September	R4.946	1.467	R5.606
	October	R5.025	1.453	R6.113
	November	R4.949	1.498	R6.599
	December	R5.170	1.619	R7.515
	TOTAL	R59.982	R16.655	R74.330
1977	January	R4.780	1.700	R7.670
	February	R4.637	1.718	R6.487
	March	R5.312	1.786	R6.384
	April	R4.995	1.604	R5.803
	May	R5.142	1.638	R5.810
	June	R5.059	1.632	R5.907
	July	R4.824	1.714	R6.011
	August	R5.025	1.638	R6.108
	September	R5.181	1.583	R5.897
	October	R5.243	R1.577	R6.092
	November	R†5.271	†1.476	R†6.287
	December	R†4.640	†1.577	R†7.261
	TOTAL	R60.110	R19.641	R75.718
1978	January	R†4.420	R†1.562	R†7.527
	February	R†4.114	R†1.339	R†6.866
	March	††4.841	†1.595	††6.808
	TOTAL (3 months)	13.374	4.496	21.201

*See Explanatory Note 1.
 **See Explanatory Note 2.
 ***See Explanatory Note 3.

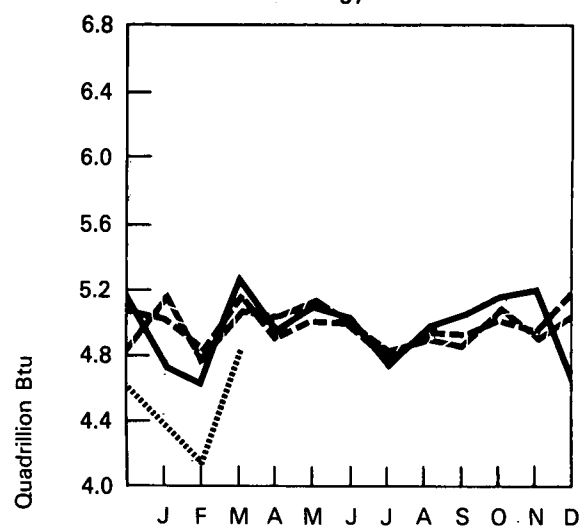
†Preliminary data.

††Partially estimated.

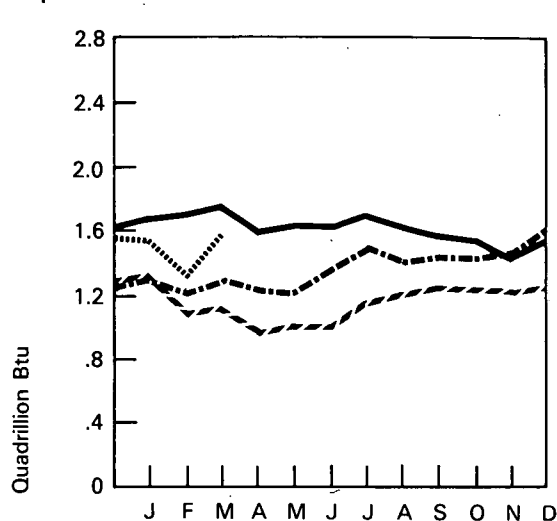
R=Revised data.

Source: Energy Information Administration (EIA) calculations based on data appearing elsewhere in this publication.

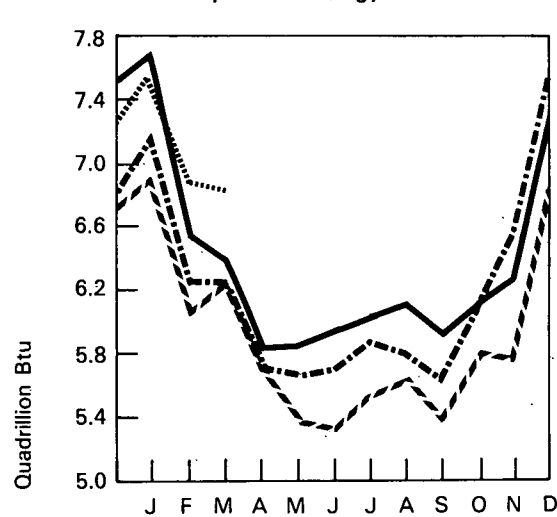
Domestic Production of Energy



Imports of Fossil Fuels



Domestic Consumption of Energy



— 1975 - - - 1976 - . - 1977 1978

Part 2 Crude Oil and Refined Petroleum Products

Strategic Petroleum Reserve

Seventeen crude oil shipments totaling 4.1 million barrels were imported in March 1978 for the Strategic Petroleum Reserve (SPR), increasing the total SPR volume in storage at the end of the month to 18.2 million barrels.* The average cost of the March deliveries was \$14.46 per barrel (including transportation fees).

Crude Oil and Refined Petroleum Products

Domestic crude oil production averaged 8.7 million barrels per day in March 1978,* including 1.0 million barrels per day from the Alaskan North Slope. The January through March 1978 average was 8.4 million barrels per day, 5.4 percent above the average for the same 3 months a year ago.

Total domestic demand for petroleum products averaged 19.7 million barrels per day in March, 9.1 percent above the March 1977 rate. The major components of domestic demand in March were: motor gasoline (36.6 percent), distillate fuel oil (21.4 percent), and residual fuel oil (18.6 percent). Total domestic demand for the first quarter of 1978 averaged 20.0 million barrels per day, up 1.9 percent from the average for the same quarter 1 year earlier.

Total petroleum imports averaged 8.3 million barrels per day in March, 10.7 percent less than the rate for last March. Imports for the first 3 months of 1978 averaged 8.0 million barrels per day, 14.0 percent less than the rate for the first 3 months of 1977.

Motor gasoline demand averaged 7.2 million barrels per day in March, 4.4 percent above the rate for March 1977. The January through March 1978 average was 6.9 million barrels per day, 2.5 percent above the average for the same 3-month period in 1977.

Motor gasoline stocks were 265.4 million barrels at the end of March 1978, 1.2 percent higher than the level of a year ago.

Distillate fuel oil demand in March averaged 4.2 million barrels per day, 23.1 percent above last March's rate. The January through March 1978 average was 4.5 million barrels per day, 1.9 percent above the level of a year earlier.

Residual fuel oil demand in March averaged 3.7 million barrels per day, 16.3 percent above the rate for last March. During the January through March 1978 period, residual demand averaged 3.6 million barrels per day, 3.0 percent above the level for January through March 1977.

*March 1978 estimates are based on preliminary data from the American Petroleum Institute and will be revised to conform with data published in EIA *Energy Data Reports* as available.

*Foreign crude oil volumes purchased for the SPR are included in petroleum imports and stocks statistics.

Crude Oil

		Crude Input to Refineries	Domestic Production*	Imports*	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	11,696	9,441	2,216	**246,395
1973	AVERAGE	12,431	9,208	3,244	**242,478
1974	AVERAGE	12,133	8,774	3,477	**265,020
1975	January	12,297	8,455	4,029	270,462
	February	12,135	8,591	3,828	276,755
	March	11,905	8,493	3,656	279,989
	April	11,803	8,457	3,378	281,908
	May	11,983	8,379	3,486	280,961
	June	12,417	8,421	3,905	276,132
	July	12,915	8,336	4,192	264,157
	August	13,046	8,249	4,581	256,616
	September	12,945	8,280	4,689	259,446
	October	12,365	8,324	4,389	269,584
	November	12,689	8,278	4,623	270,950
	December	12,779	8,254	4,476	271,354
	AVERAGE	12,442	8,375	4,105	
1976	January	12,560	8,232	4,594	289,296
	February	12,834	8,231	4,208	277,414
	March	12,877	8,232	4,738	283,112
	April	12,727	8,077	4,790	286,628
	May	12,920	8,125	4,669	283,982
	June	13,799	8,094	5,628	281,715
	July	13,901	8,127	5,792	282,599
	August	13,888	8,111	5,556	277,272
	September	13,716	8,150	5,875	284,357
	October	13,319	8,063	5,689	297,683
	November	14,101	8,080	5,946	298,836
	December	14,333	8,061	5,925	285,471
	AVERAGE	13,416	8,132	5,287	
1977	January	14,140	7,790	6,288	294,037
	February	14,740	8,067	6,652	291,387
	March	14,270	8,022	6,633	299,464
	April	14,185	8,079	6,785	318,588
	May	14,605	8,009	6,821	328,559
	June	14,867	8,039	6,997	333,635
	July	14,884	8,040	7,021	335,193
	August	14,645	8,244	6,416	338,300
	September	14,930	8,416	6,429	334,180
	October	R14,658	R8,508	6,363	R343,163
	November	14,611	8,699	6,207	337,921
	December	14,741	8,606	6,124	338,911
	AVERAGE	R14,605	R8,210	6,560	
1978	January	R14,213	R8,193	R6,085	R342,167
	February	R13,974	R8,236	R5,625	R340,975
	March	14,055	8,717	5,824	345,532
	AVERAGE (3 months)	14,084	8,387	5,852	

*See Definitions.

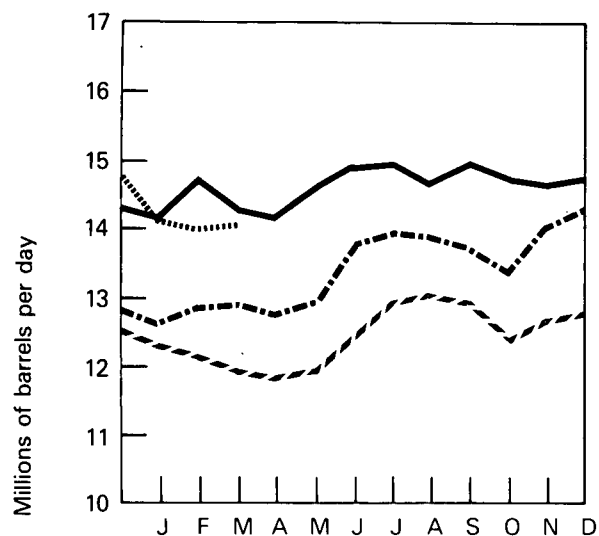
**Total as of December 31.

R=Revised data.

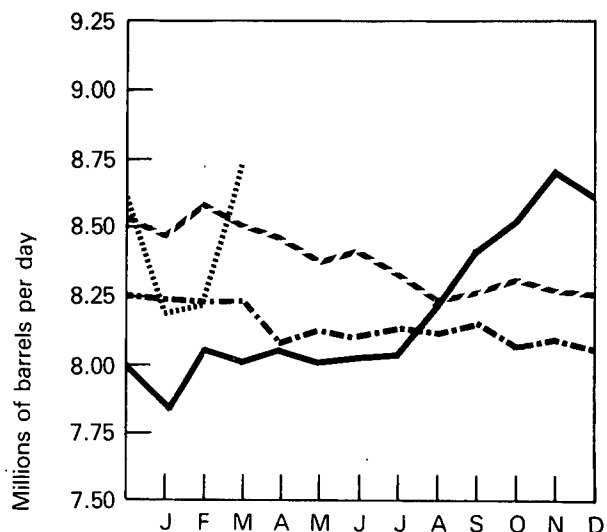
Sources: 1972 through 1976: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual;" January 1977 through April 1977: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" May 1977 through October 1977 Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly;" November 1977 through February 1978: EIA "Monthly Petroleum Statistics Report;" March 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

Crude Oil

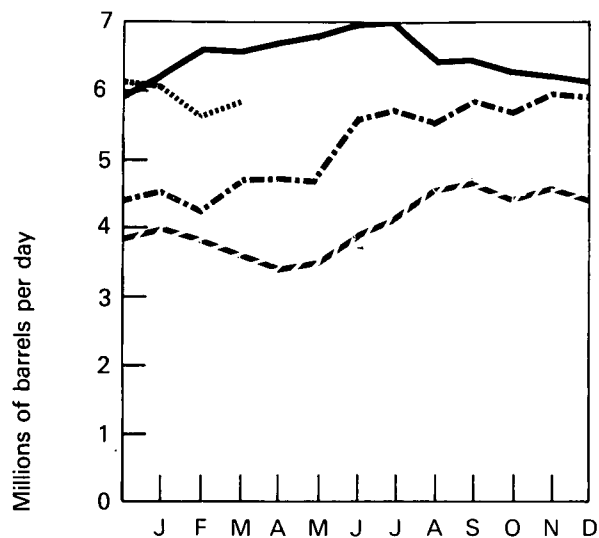
Crude Input to Refineries



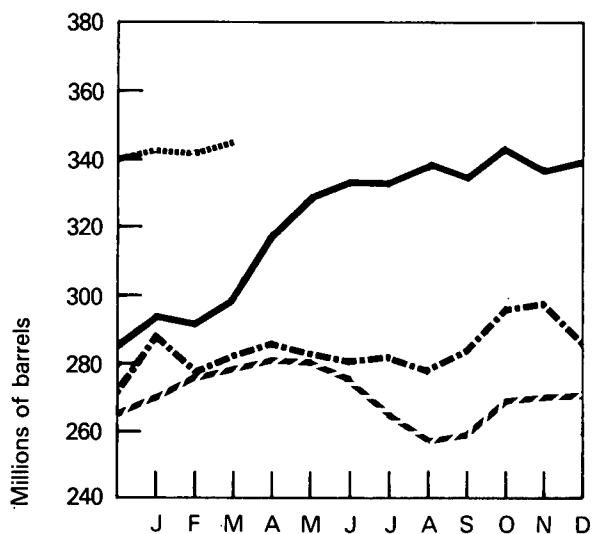
Domestic Production



Imports



Stocks



--- 1975 BOM
 --- 1976 BOM
 --- 1977 BOM, EIA
 1978 EIA, API

Total Refined Petroleum Products

Total Petroleum Imports (Crude Oil and Refined Products)

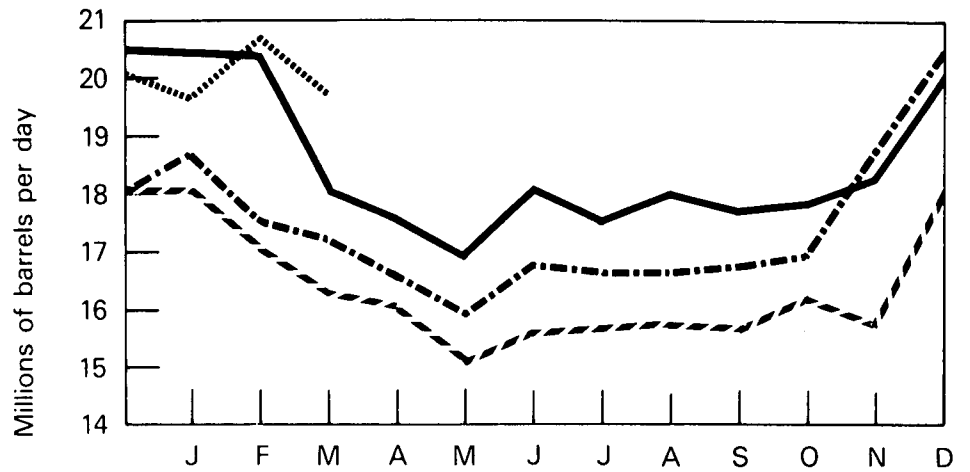
		Domestic Demand	Imports*	
		Thousands of barrels per day		Thousands of barrels per day
1972	AVERAGE	16,367	2,525	4,741
1973	AVERAGE	17,308	3,012	6,256
1974	AVERAGE	16,653	2,635	6,112
1975	January	18,004	2,832	6,861
	February	17,084	2,348	6,176
	March	16,315	2,074	5,730
	April	16,048	1,662	5,040
	May	15,155	1,728	5,214
	June	15,610	1,502	5,406
	July	15,740	1,767	5,959
	August	15,806	1,717	6,298
	September	15,768	2,115	6,804
	October	16,377	1,940	6,329
	November	15,777	1,796	6,419
	December	18,185	1,949	6,425
	AVERAGE	16,322	1,951	6,056
1975	January	18,647	2,119	6,714
	February	17,509	2,504	6,712
	March	17,302	1,949	6,687
	April	16,672	1,806	6,595
	May	15,977	1,654	6,323
	June	16,825	1,847	7,474
	July	16,607	2,092	7,884
	August	16,642	1,827	7,382
	September	16,837	2,050	7,924
	October	17,090	1,847	7,536
	November	18,847	2,115	8,060
	December	20,560	2,522	8,447
	AVERAGE	17,461	2,026	7,313
1977	January	20,481	2,594	8,882
	February	20,427	3,278	9,930
	March	18,056	2,610	9,243
	April	17,570	1,886	8,671
	May	16,960	1,753	8,574
	June	18,048	1,872	8,869
	July	17,549	2,021	9,042
	August	18,009	2,175	8,591
	September	17,733	2,136	8,565
	October	R17,831	R1,862	8,225
	November	18,300	1,711	7,918
	December	20,049	2,064	8,188
	AVERAGE	R18,407	R2,157	R8,717
1978	January	R19,605	R2,039	R8,124
	February	R20,768	R2,021	R7,646
	March	19,698	2,434	8,258
	AVERAGE (3 months)	19,999	2,169	8,021

*See Definitions.

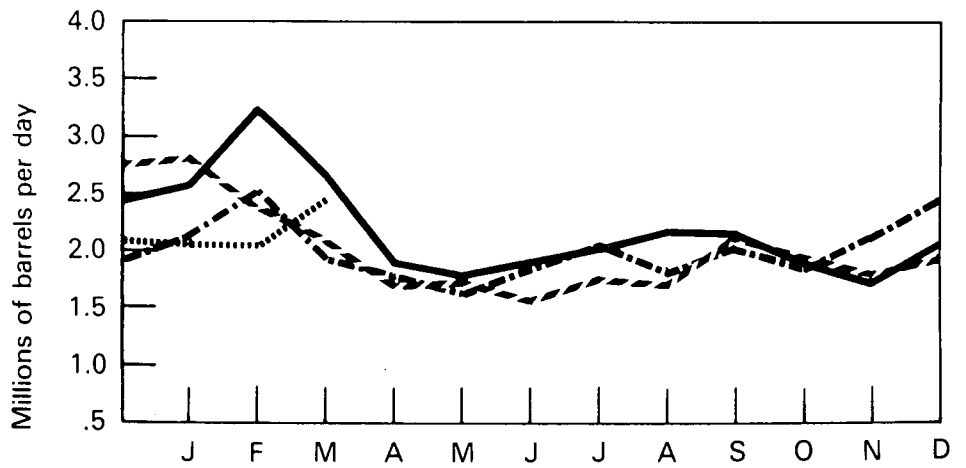
R=Revised data.

Sources: 1972 through 1976: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual;" January 1977 through April 1977: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" May 1977 through October 1977: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly;" November 1977 through February 1978: EIA "Monthly Petroleum Statistics Report;" March 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

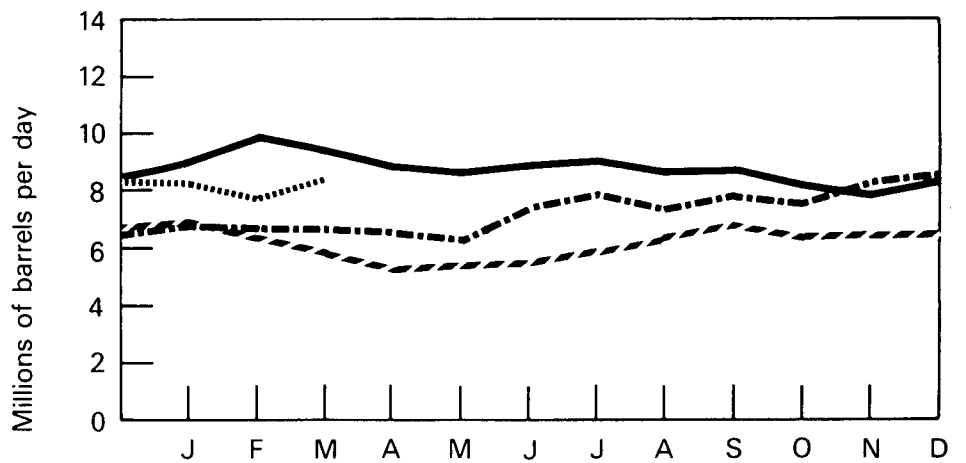
Total Refined Product Domestic Demand



Refined Product Imports



Total Petroleum Imports



--- 1975 BOM
 -.- 1976 BOM
 — 1977 BOM, EIA
 1978 EIA, API

Direct and Indirect* U.S. Petroleum Imports from OPEC Countries

	Algeria	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	United Arab Emirates	Venezuela	Other OPEC**	Total OPEC	Arab Members of OPEC
Thousands of barrels per day											
1973											
Direct	134.2	212.7	222.7	164.3	458.9	487.3	70.6	1,124.7	106.5	2,981.9	914.4
Indirect	17.0	25.0	211.0	144.0	149.0	253.0	13.0	509.0	88.0	1,409.0	463.0
TOTAL	151.2	237.7	433.7	308.3	607.9	740.3	83.6	1,633.7	194.5	4,390.9	1,377.4
1974											
Direct	190.2	300.1	468.8	4.4	697.6	460.6	70.5	979.3	88.3	3,259.8	748.5
Indirect	16.9	40.8	262.2	35.9	214.6	214.6	17.3	478.5	128.7	1,409.5	357.9
TOTAL	207.1	310.9	731.0	40.3	912.2	675.2	87.8	1,457.8	217.0	4,669.3	1,106.4
1975											
Direct	281.5	388.4	280.4	232.0	761.5	715.0	116.7	697.6	116.1	3,589.2	1,381.3
Indirect	6.7	49.3	244.4	97.3	76.3	176.6	37.5	332.5	143.2	1,163.8	408.8
TOTAL	288.2	437.7	524.8	329.3	837.8	891.6	154.2	1,030.1	259.3	4,753.0	1,790.1
1976											
Direct	428.3	537.4	298.5	453.3	1,025.2	1,229.8	255.2	699.2	134.0	5,060.9	2,421.0
Indirect	10.0	32.0	248.0	76.0	94.0	136.0	68.0	273.0	82.0	1,019.0	352.0
TOTAL	438.3	569.4	546.5	529.3	1,119.2	1,365.8	323.2	972.2	216.0	6,079.9	2,773.0
1977											
Direct											
January	493.0	619.2	396.8	627.0	1,285.8	1,328.0	319.5	841.8	324.2	6,236.0	3,000.0
February	666.1	570.3	412.4	638.0	1,265.1	1,441.8	316.7	920.6	241.0	6,472.0	3,141.1
March	459.8	567.0	735.0	701.2	1,300.0	1,371.6	369.5	664.3	184.3	6,352.7	3,022.1
April	660.7	523.9	517.2	782.9	1,242.4	1,437.4	323.5	663.3	250.5	6,401.8	3,363.2
May	392.8	512.7	539.3	784.1	1,072.3	1,724.1	237.1	534.4	435.9	6,232.7	3,451.3
June	436.6	671.6	553.0	827.1	1,190.8	1,432.7	438.6	668.7	343.5	6,562.6	3,374.1
July	573.9	519.0	857.3	763.4	1,194.7	1,369.8	286.1	625.8	377.8	6,567.8	3,232.1
August	632.2	552.8	500.1	640.0	960.5	1,449.4	308.6	744.4	276.9	6,064.9	3,169.8
September	550.8	391.0	448.9	679.2	1,084.8	1,487.4	348.4	744.8	201.0	5,936.3	3,215.1
October	626.2	461.0	413.0	690.5	1,104.2	1,303.3	246.9	586.7	272.0	5,703.9	2,998.1
November	569.1	495.8	422.7	840.1	946.9	1,065.7	417.3	499.2	262.7	5,519.5	3,088.6
December	553.0	467.8	549.0	585.2	987.1	1,054.7	390.4	683.7	282.6	5,553.5	2,799.5
Total Direct	549.7	523.2	530.2	713.1	1,175.4	1,371.8	333.1	682.2	288.3	6,131.1	3,092.6
Indirect	14.5	47.1	256.2	124.9	94.3	152.0	113.3	229.4	89.8	1,121.5	476.7
TOTAL	564.2	570.3	786.4	838.0	1,229.7	1,523.8	446.4	911.6	378.1	7,252.6	3,569.3
1978											
Direct											
January	682.3	453.2	659.3	545.9	822.9	1,200.3	348.7	630.6	212.1	5,555.3	2,646.2
February	617.0	375.6	526.2	575.8	752.5	980.1	485.8	621.1	251.3	5,185.4	2,414.4
Total Direct	651.3	416.4	596.1	560.1	789.5	1,095.8	413.8	626.1	230.7	5,379.8	2,535.7
Indirect	14.5	47.1	256.2	124.9	94.3	152.0	113.3	229.4	89.8	1,121.5	476.7
TOTAL	665.8	463.5	852.3	685.0	883.8	1,247.8	527.1	855.5	320.5	6,501.3	3,012.4
(2 months)											

*Indirect imports refer to U.S. imports of petroleum products, primarily from Caribbean and European areas, that have been refined from crude oil produced in other areas. U.S. imports of these products have been prorated to each OPEC country of origin based on the share of total crude oil supply in the Caribbean and European areas which was imported from each OPEC country.

**Includes Ecuador, Gabon, Iraq, Kuwait, and Qatar.

Sources: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly" and "PAD Districts Supply/Demand, Monthly" through April 1977; EIA *Energy Data Reports*, "PAD Districts Supply/Demand, Monthly" for May through October 1977; EIA "Monthly Petroleum Statistics Report" for October 1977 through February 1978; and EIA estimates.

U.S. Petroleum Imports from Non-OPEC Sources

	Bahamas	Canada	Netherlands Antilles	Puerto Rico	Trinidad and Tobago	Virgin Islands	Mexico	Other	Total
Thousands of barrels per day									
1973	170.8	1,312.9	573.6	99.3	250.6	329.2	15.2	523.5	3,274.2
1974	159.3	1,067.6	509.6	90.4	241.2	391.7	8.4	384.2	2,852.4
1975									
January	216.1	949.1	549.4	99.0	232.9	563.5	20.4	299.1	2,929.5
February	213.9	854.5	315.2	148.8	255.1	490.3	46.0	269.7	2,593.5
March	162.6	746.9	279.5	139.0	185.7	506.4	37.6	258.1	2,315.8
April	168.9	704.3	237.7	73.1	171.8	353.3	37.2	236.7	1,983.0
May	122.3	574.2	242.9	77.9	237.1	413.4	85.8	218.4	1,971.7
June	130.0	872.7	261.6	75.1	204.5	352.6	72.4	157.2	2,126.1
July	178.3	889.1	368.3	104.9	281.1	320.8	85.4	273.3	2,501.2
August	135.8	887.9	333.1	72.9	289.4	399.1	71.4	293.5	2,483.1
September	143.6	918.0	428.6	66.9	283.2	389.7	98.0	516.3	2,844.3
October	135.8	946.3	357.8	105.8	222.2	336.3	109.4	448.2	2,661.8
November	88.8	893.1	280.0	60.6	265.5	353.0	107.0	411.8	2,459.8
December	119.5	907.3	238.0	50.9	262.5	405.9	85.0	290.0	2,359.1
TOTAL	152.0	845.2	323.6	89.7	240.9	406.5	71.4	306.1	2,435.4
1976									
January	134.1	681.7	291.7	71.0	343.2	468.4	58.7	321.5	2,370.3
February	127.6	644.9	262.4	122.2	326.3	462.3	70.0	251.7	2,267.4
March	90.4	590.2	328.7	114.0	315.6	424.5	108.0	367.5	2,338.9
April	131.9	578.4	274.9	68.5	291.9	341.2	112.0	404.5	2,203.3
May	95.2	614.9	214.1	70.6	257.5	388.5	89.3	316.4	2,046.5
June	104.2	653.3	190.4	54.3	319.3	427.5	79.5	373.5	2,202.0
July	112.8	581.7	259.1	77.9	279.2	386.5	79.4	434.0	2,210.6
August	98.5	580.9	268.7	81.5	163.6	437.2	88.1	428.5	2,147.0
September	143.1	564.8	273.3	104.1	182.6	408.5	84.8	453.1	2,214.3
October	78.3	562.0	239.0	92.2	215.2	460.5	79.2	422.8	2,149.2
November	140.4	561.8	267.6	104.1	254.3	454.4	132.1	333.2	2,247.9
December	141.5	578.3	400.3	98.5	324.2	408.4	65.5	405.0	2,421.3
TOTAL	116.5	599.3	274.6	88.1	272.6	422.3	87.1	373.5	2,234.0
1977									
January	170.0	505.9	304.1	82.5	316.2	619.6	97.9	549.8	2,646.0
February	289.5	605.1	406.6	86.3	406.3	548.8	168.1	947.8	3,458.5
March	200.4	561.7	257.3	97.4	286.5	505.5	171.5	810.4	2,890.7
April	130.7	506.1	110.1	85.3	210.5	409.0	155.2	662.4	2,269.3
May	138.5	437.8	153.7	105.8	308.1	376.2	173.6	647.6	2,341.3
June	137.7	493.0	196.2	89.4	271.1	322.0	180.7	616.0	2,306.1
July	169.8	482.9	239.0	129.7	275.8	477.7	158.7	540.1	2,473.7
August	168.8	501.5	224.5	88.4	281.2	461.6	213.6	586.9	2,526.5
September	140.2	528.5	201.1	156.7	250.9	433.9	167.6	750.1	2,629.0
October	122.3	487.0	197.4	114.1	288.4	451.9	246.6	612.9	2,520.6
November	184.4	458.3	100.4	98.7	237.5	462.8	230.7	626.3	2,399.1
December	170.3	511.1	240.2	97.8	305.5	555.6	186.5	567.1	2,634.1
TOTAL	167.7	513.9	218.7	102.8	286.0	468.7	179.3	657.4	2,583.5
1978									
January	170.5	453.6	253.5	98.0	295.0	466.0	236.4	594.8	2,567.8
February	215.6	487.7	98.1	91.3	295.8	490.6	211.2	570.3	2,460.6
TOTAL (2 months)	191.9	469.8	179.8	94.8	295.4	477.7	224.4	583.2	2,516.9

Source: Bureau of Mines Mineral Industry Surveys, "Petroleum Statement, Monthly" and "PAD Districts Supply/Demand, Monthly," through April 1977; EIA Energy Data Reports, "PAD Districts Supply/Demand Monthly" for May 1977 through October 1977; and EIA "Monthly Petroleum Statistics Report" for October 1977 through February 1978.

Motor Gasoline

		Domestic Demand					
		Total	Unleaded	Unleaded Percent of Total	Production*	Imports	Stocks* Thousands of barrels
		Thousands of barrels per day					
1972	AVERAGE	6,376	NA	NA	6,281	68	**212,770
1973	AVERAGE	6,674	NA	NA	6,527	134	**209,395
1974	AVERAGE	6,537	NA	NA	6,358	204	**218,346
1975	January	6,206	NA	NA	6,509	262	***242,285
	February	6,096	NA	NA	6,276	171	251,915
	March	6,326	NA	NA	6,070	150	248,685
	April	6,718	NA	NA	6,046	133	232,556
	May	6,871	NA	NA	6,126	142	213,947
	June	7,076	NA	NA	6,669	177	207,114
	July	7,041	NA	NA	7,003	209	212,454
	August	7,008	NA	NA	6,872	232	215,480
	September	6,729	NA	NA	6,823	269	226,447
	October	6,778	NA	NA	6,410	207	221,493
	November	6,390	NA	NA	6,602	139	232,091
	December	6,808	NA	NA	6,786	119	234,925
	AVERAGE	6,675	NA	NA	6,518	184	
1976	January	6,398	NA	NA	6,483	92	240,464
	February	6,263	1,117	17.8	6,473	84	248,854
	March	6,890	1,456	21.1	6,455	123	239,049
	April	7,159	1,312	18.3	6,562	99	223,965
	May	6,853	1,393	20.3	6,775	112	225,037
	June	7,482	1,549	20.7	7,303	188	225,365
	July	7,315	1,594	21.8	7,174	190	226,922
	August	7,168	1,553	21.7	7,149	141	230,578
	September	7,079	1,628	23.0	6,878	171	229,751
	October	6,929	1,552	22.4	6,678	138	226,300
	November	7,038	1,604	22.8	6,938	146	227,742
	December	7,138	1,797	25.2	7,176	84	231,387
	AVERAGE	6,978	1,508	21.6	6,838	131	
1977	January	6,466	1,549	24.0	6,934	222	252,608
	February	6,897	1,773	25.7	6,817	184	255,519
	March	6,899	1,657	24.0	6,864	245	262,118
	April	7,348	1,863	25.4	6,968	269	258,831
	May	7,034	1,803	25.6	6,950	202	262,498
	June	7,595	2,142	28.2	7,145	246	256,389
	July	7,441	2,146	28.8	7,248	248	258,152
	August	7,419	2,096	28.3	7,191	187	256,904
	September	7,317	2,080	28.4	7,062	220	255,859
	October	R7,132	2,135	29.9	R6,932	179	R255,194
	November	7,196	2,060	28.6	7,123	179	258,039
	December	7,378	2,400	32.5	7,145	196	256,864
	AVERAGE	R7,177	1,976	27.5	7,033	215	
1978	January	R6,644	2,097	31.6	R6,943	R210	R272,601
	February	R6,914	2,162	30.8	R6,620	R210	R270,181
	March	7,205	NA	NA	6,833	162	265,390
	AVERAGE (3 months)	6,921	2,128	31.2	6,805	193	

*See Definitions.

**Total as of December 31.

***Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

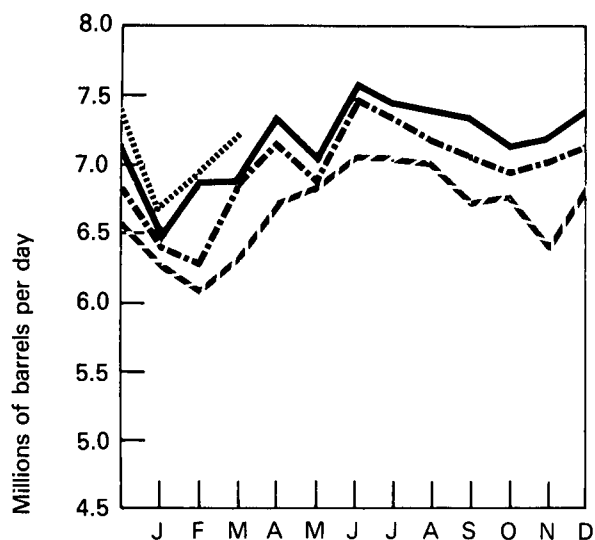
R=Revised data.

NA=Not available.

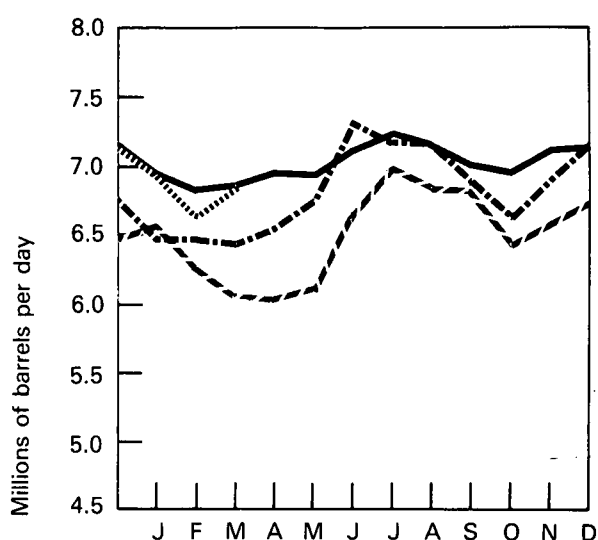
Sources: 1972 through 1976: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual;" January 1977 through April 1977: Bureau of Mines *Mineral Industry Surveys*, "Petroleum, Statement, Monthly;" May 1977 through October 1977: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly;" November 1977 through February 1978: "Monthly Petroleum Statistics Report;" March 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

Motor Gasoline

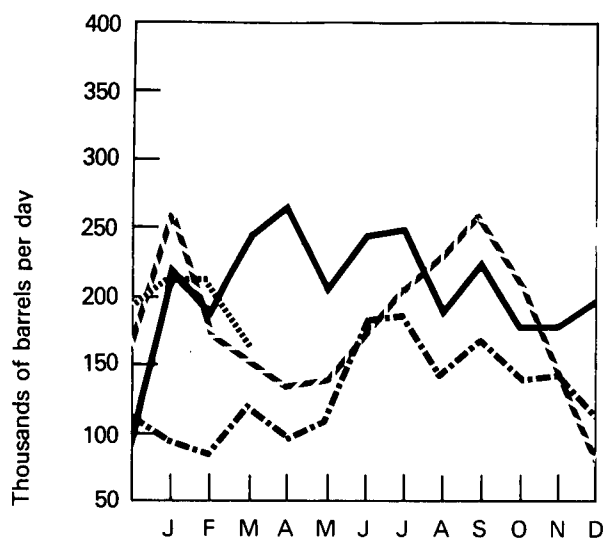
Domestic Demand



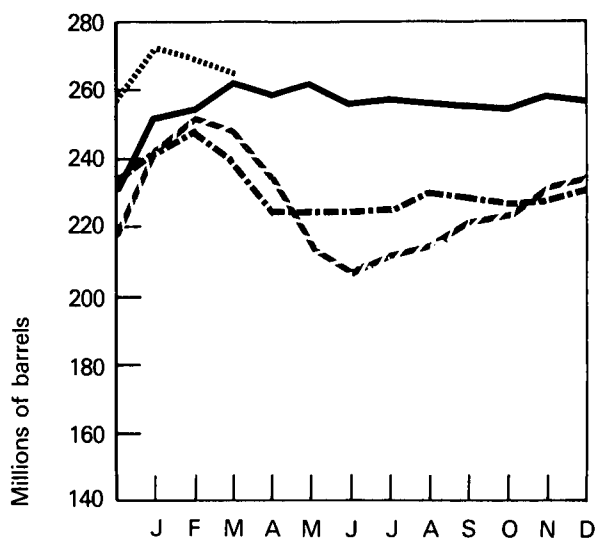
Production



Imports



Stocks



--- 1975 BOM
 -.- 1976 BOM
 — 1977 BOM, EIA
 1978 EIA, API

Jet Fuel

		Domestic Demand	Production	Imports	Stocks
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	1,045	847	194	*25,493
1973	AVERAGE	1,059	859	212	*28,544
1974	AVERAGE	993	836	163	*29,435
1975	January	1,041	831	229	**30,321
	February	1,075	835	200	29,133
	March	982	896	130	30,456
	April	1,006	864	137	30,263
	May	977	861	133	30,719
	June	989	839	106	29,337
	July	954	883	88	29,798
	August	1,046	958	132	31,103
	September	1,040	907	140	31,291
	October	997	864	106	30,410
	November	999	864	89	28,977
	December	911	849	109	30,380
	AVERAGE	1,001	871	133	
1976	January	948	889	69	30,618
	February	965	918	71	31,180
	March	965	927	86	32,619
	April	1,010	927	108	33,332
	May	960	899	106	34,664
	June	972	879	68	33,879
	July	1,099	933	130	32,732
	August	965	942	38	33,121
	September	1,048	990	63	33,204
	October	911	890	50	34,032
	November	978	920	56	33,859
	December	1,027	900	72	32,085
	AVERAGE	987	918	76	
1977	January	1,054	917	77	30,170
	February	1,036	974	74	30,455
	March	1,041	954	98	30,739
	April	1,019	991	86	32,355
	May	993	979	57	33,644
	June	989	996	30	34,707
	July	1,043	969	85	35,048
	August	1,113	1,009	71	33,986
	September	1,050	1,004	53	34,159
	October	R1,016	973	R67	R34,861
	November	1,015	950	86	35,483
	December	1,108	978	83	33,991
	AVERAGE	1,040	974	72	
1978	January	R962	922	R62	34,605
	February	R1,091	R994	R53	R33,332
	March	978	962	90	34,821
	AVERAGE (3 months)	1,008	958	69	

*Total as of December 31.

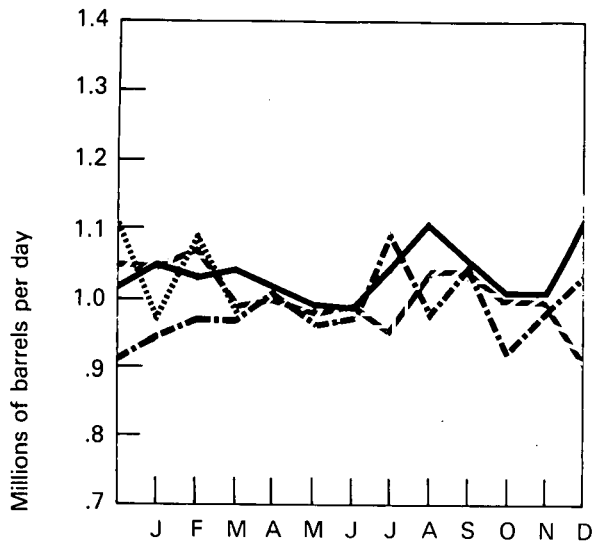
**Bureau of Mines' stock coverage was expanded at the end of 1974 to include an additional 100 bulk terminal operators; the new coverage begins here with January 1975.

R=Revised data.

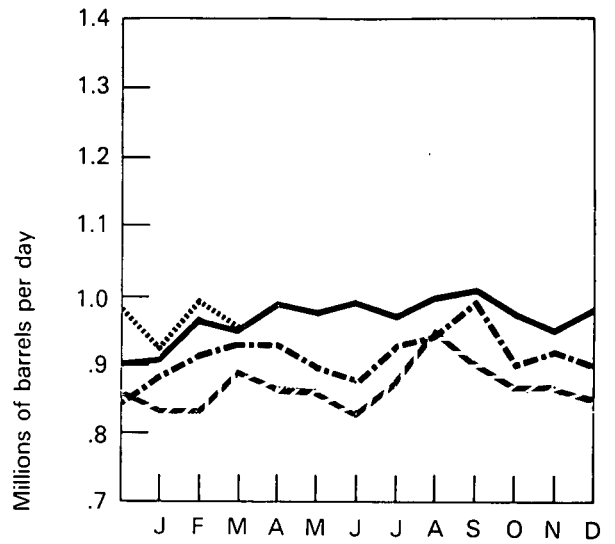
Sources: 1972 through 1976: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual;" January 1977 through April 1977: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" May 1977 through October 1977: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly;" November 1977 through February 1978: EIA "Monthly Petroleum Statistics Report;" March 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

Jet Fuel

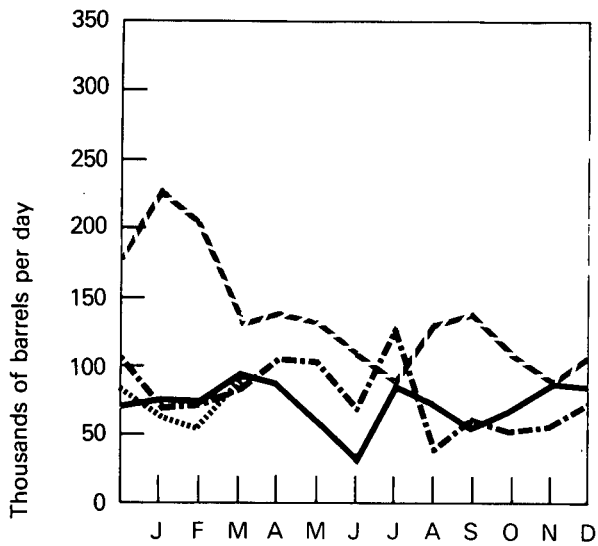
Domestic Demand



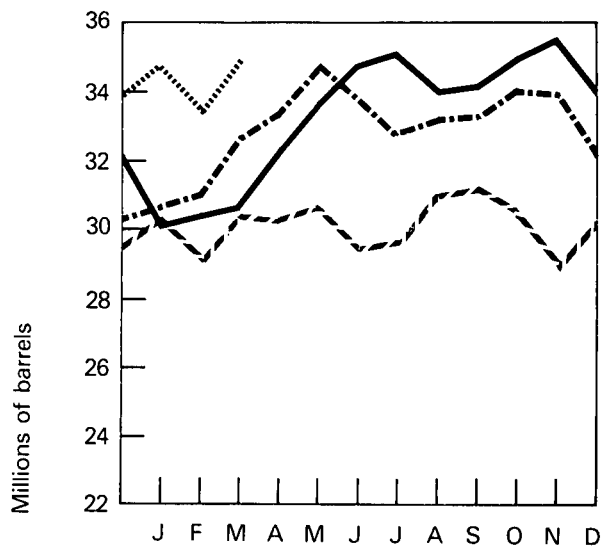
Production



Imports



Stocks



--- 1975 BOM
 -.- 1976 BOM
 — 1977 BOM, EIA
 1978 EIA, API

Distillate Fuel Oil

		Domestic Demand	Production*	Imports	Stocks*
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	2,913	2,630	182	**154,284
1973	AVERAGE	3,092	2,820	392	**196,421
1974	AVERAGE	2,948	2,668	289	**200,029
1975	January	3,963	2,852	334	***199,715
	February	3,803	2,679	302	176,696
	March	3,292	2,532	255	161,111
	April	3,094	2,487	110	146,214
	May	2,382	2,431	136	152,027
	June	2,267	2,574	69	163,306
	July	2,109	2,590	104	181,472
	August	2,173	2,592	92	197,323
	September	2,163	2,812	130	220,732
	October	2,677	2,745	104	226,113
	November	2,544	2,767	96	235,749
	December	3,792	2,783	138	208,787
	AVERAGE	2,851	2,653	155	
1976	January	4,297	2,734	163	165,428
	February	3,697	2,961	218	150,439
	March	3,339	2,793	153	138,306
	April	2,788	2,655	96	137,249
	May	2,519	2,738	97	147,057
	June	2,436	2,885	151	165,064
	July	2,255	2,959	126	190,861
	August	2,237	2,982	131	217,930
	September	2,620	2,947	149	232,230
	October	3,031	2,995	144	235,599
	November	3,714	3,180	135	223,648
	December	4,667	3,255	196	185,948
	AVERAGE	3,133	2,924	146	
1977	January	5,111	3,375	350	142,989
	February	4,714	3,702	664	133,261
	March	3,421	3,179	519	141,882
	April	2,942	3,001	153	148,246
	May	2,777	3,124	99	162,123
	June	2,776	3,198	135	178,842
	July	2,545	3,192	192	204,899
	August	2,635	3,274	161	229,757
	September	2,717	3,314	169	252,783
	October	R3,038	R3,363	R150	R267,392
	November	3,414	3,336	R179	270,481
	December	4,172	3,280	236	250,153
	AVERAGE	R3,348	R3,275	R248	
1978	January	R4,426	R3,106	R196	R215,110
	February	R4,861	R2,917	R190	R165,845
	March	4,212	3,016	197	139,984
	AVERAGE (3 months)	4,488	3,016	194	

*See Definitions.

**Total as of December 31.

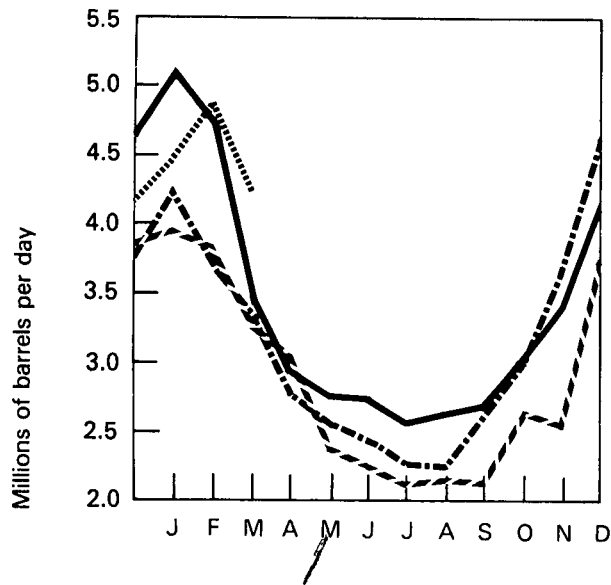
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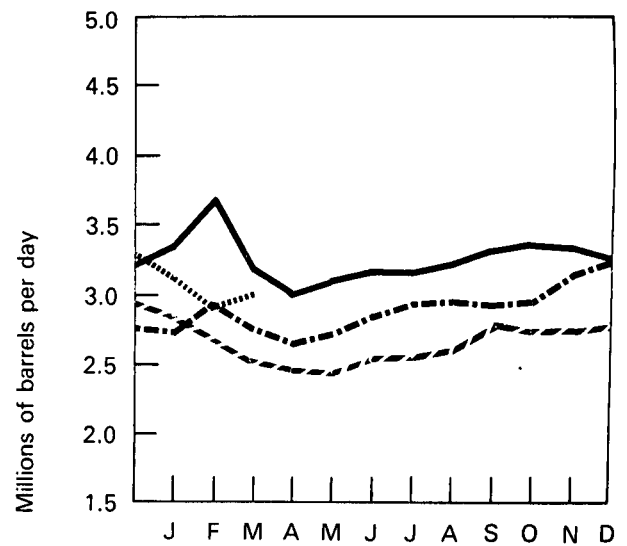
Sources: 1972 through 1976: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual;" January 1977 through April 1977: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" May 1977 through October 1977: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly;" November 1977 through February 1978: EIA "Monthly Petroleum Statistics Report;" March 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

Distillate Fuel Oil

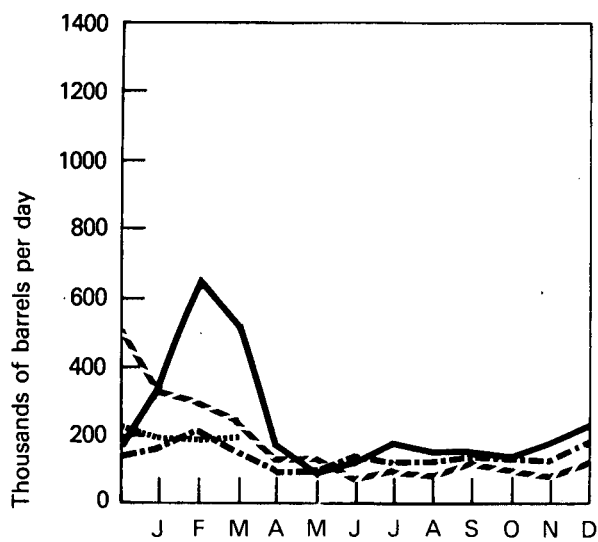
Domestic Demand



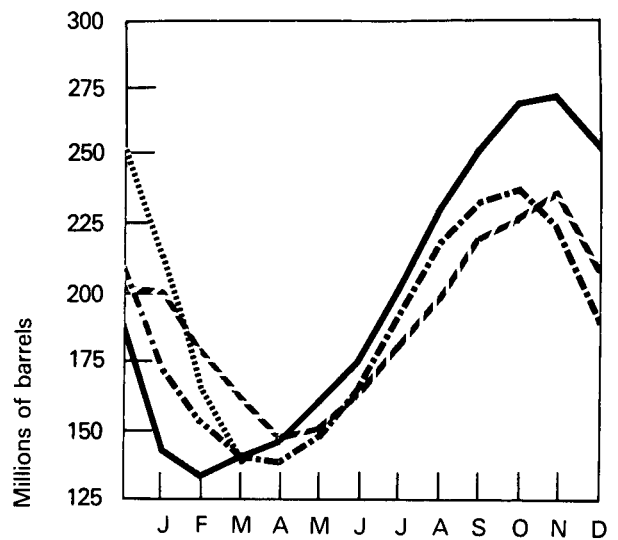
Production



Imports



Stocks



--- 1975 BOM
 -.- 1976 BOM
 — 1977 BOM, EIA
 1978 EIA, API

Residual Fuel Oil

		Domestic Demand	Production	Imports	Stocks
		Thousands of barrels per day			Thousands of barrels
1972	AVERAGE	2,529	799	1,742	*55,216
1973	AVERAGE	2,822	971	1,853	*53,480
1974	AVERAGE	2,639	1,070	1,587	*59,694
1975	January	3,253	1,415	1,657	**69,233
	February	2,849	1,354	1,402	66,495
	March	2,669	1,299	1,293	64,148
	April	2,232	1,245	1,054	66,340
	May	2,087	1,151	1,160	73,498
	June	2,177	1,152	902	69,660
	July	2,220	1,155	1,125	71,526
	August	2,157	1,146	1,021	71,857
	September	2,328	1,183	1,311	76,938
	October	2,268	1,165	1,251	81,858
	November	2,405	1,214	1,225	83,131
	December	2,912	1,354	1,283	74,126
	AVERAGE	2,462	1,235	1,223	
1976	January	3,118	1,415	1,455	66,592
	February	3,077	1,394	1,774	68,859
	March	2,779	1,311	1,342	65,132
	April	2,496	1,283	1,258	66,458
	May	2,439	1,257	1,134	65,147
	June	2,509	1,241	1,229	64,272
	July	2,548	1,266	1,455	69,812
	August	2,678	1,321	1,307	68,490
	September	2,526	1,330	1,452	76,436
	October	2,547	1,351	1,270	79,117
	November	3,253	1,581	1,474	73,284
	December	3,645	1,772	1,828	72,344
	AVERAGE	2,801	1,377	1,413	
1977	January	3,741	1,889	1,596	64,749
	February	3,662	1,951	1,943	71,414
	March	3,150	1,715	1,417	71,186
	April	2,855	1,687	1,125	70,165
	May	2,719	1,671	1,145	73,376
	June	2,954	1,714	1,181	71,924
	July	2,805	1,729	1,271	77,770
	August	3,046	1,634	1,441	78,762
	September	2,926	1,750	1,458	87,522
	October	R2,707	R1,749	R1,218	R95,896
	November	2,803	1,696	R1,093	95,098
	December	3,339	1,809	1,354	89,548
	AVERAGE	R3,056	R1,748	R1,350	
1978	January	R3,508	R1,890	R1,359	R81,462
	February	R3,699	R1,787	R1,317	R64,758
	March	3,662	1,680	1,764	66,843
	AVERAGE (3 months)	3,620	1,786	1,485	

*Total as of December 31.

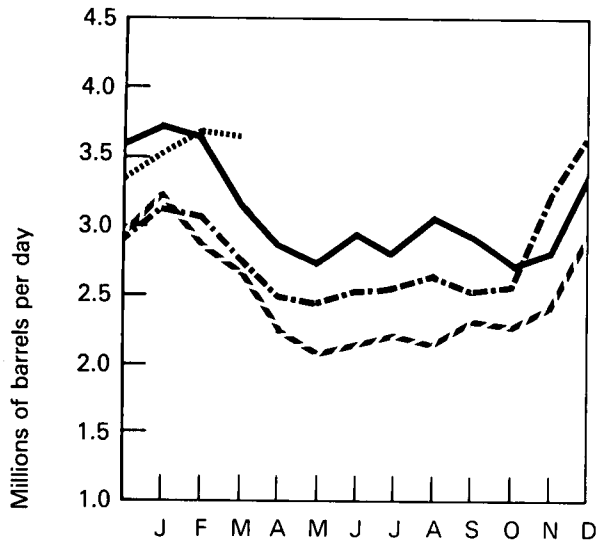
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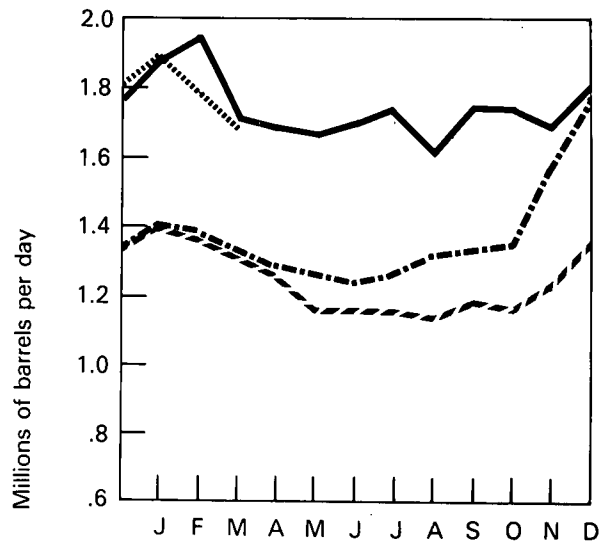
Sources: 1972 through 1976: Bureau of Mines (BOM) *Mineral Industry Surveys*, "Petroleum Statement, Annual;" January 1977 through April 1977: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" May 1977 through October 1977: Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly;" November 1977 through February 1978: EIA "Monthly Petroleum Statistics Report;" March 1978 data are EIA estimates based on data from the American Petroleum Institute (API) "Weekly Statistical Bulletin."

Residual Fuel Oil

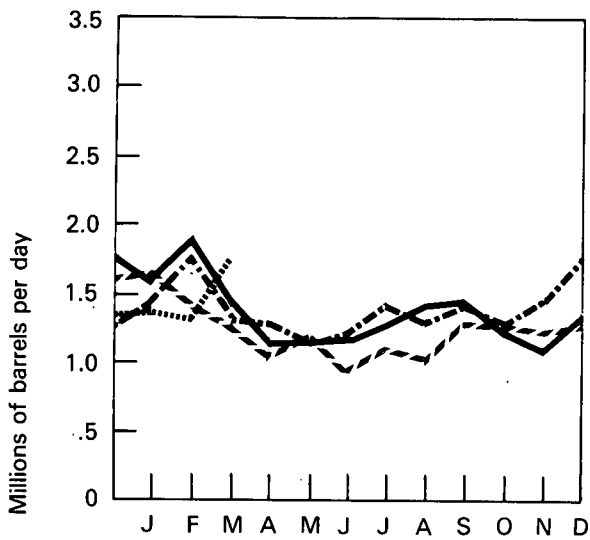
Domestic Demand



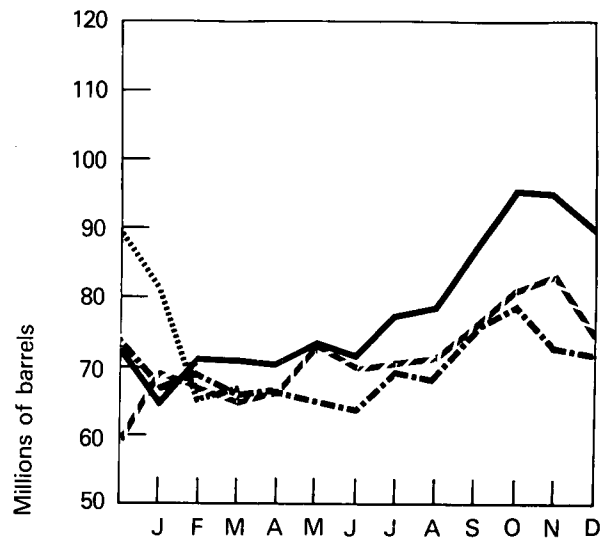
Production



Imports



Stocks



--- 1975 BOM
 -.- 1976 BOM
 — 1977 BOM, EIA
 1978 EIA, API

Natural Gas Liquids

		Domestic Demand*	Production*		Used at Refineries*	Imports	Stocks*
			At processing plants	At refineries			
			Thousands of barrels per day				Thousands of barrels
1972	AVERAGE	1,420	1,744	365	826	174	**92,024
1973	AVERAGE	1,454	1,738	375	815	239	**106,659
1974	AVERAGE	1,422	1,688	338	746	212	**120,175
1975	January	1,708	1,630	307	756	257	110,697
	February	1,512	1,646	296	734	181	106,205
	March	1,404	1,658	280	731	178	104,365
	April	1,242	1,635	273	667	176	105,521
	May	1,002	1,607	299	628	97	119,052
	June	998	1,646	323	659	166	132,553
	July	1,191	1,621	336	701	173	139,095
	August	1,227	1,650	357	690	163	145,920
	September	1,278	1,577	326	703	209	148,948
	October	1,429	1,643	310	729	198	147,793
	November	1,444	1,635	309	759	196	145,052
	December	1,787	1,646	310	768	232	132,653
	AVERAGE	1,352	1,633	311	710	185	
1976	January	1,885	1,585	305	728	240	116,707
	February	1,518	1,640	316	793	270	113,373
	March	1,303	1,615	333	674	194	117,486
	April	1,201	1,616	349	716	171	123,100
	May	1,138	R1,581	376	R673	144	131,421
	June	1,110	1,606	356	718	163	139,291
	July	1,103	1,592	354	710	147	147,034
	August	1,213	1,596	362	695	160	152,704
	September	1,243	1,602	352	713	152	156,436
	October	1,497	1,601	309	709	203	152,666
	November	1,747	R1,615	331	726	244	143,422
	December	1,921	1,589	341	853	269	124,518
	AVERAGE	1,407	R1,603	340	725	196	
1977	January	2,018	1,549	323	730	331	106,524
	February	1,887	1,589	336	693	238	94,128
	March	1,354	1,687	331	688	239	100,025
	April	1,228	1,664	337	672	198	108,235
	May	1,167	1,620	397	614	165	120,018
	June	1,235	1,616	364	622	203	129,315
	July	1,133	1,609	381	594	157	141,631
	August	1,181	1,593	360	659	204	150,830
	September	1,220	1,585	355	654	148	156,726
	October	R1,242	1,632	355	710	168	R162,440
	November***	R1,765	1,627	352	R700	R187	R152,971
	December***	R1,703	1,637	345	756	239	R145,065
	AVERAGE	R1,425	1,618	353	R674	R206	
1978	January***	R1,947	R1,557	327	674	294	R130,797
	February***	R1,748	1,578	340	640	211	R123,066
	March***	1,607	1,589	347	636	232	120,220
	AVERAGE (3 months)	1,768	1,575	338	650	247	

*See Explanatory Note 4.

**Total as of December 31.

***Estimated.

R=Revised data.

Source: Bureau of Mines *Mineral Industry Surveys*, "Petroleum Statement, Monthly" through April 1977; EIA *Energy Data Reports*, "Petroleum Statement, Monthly" and EIA estimates for May 1977 forward.

U.S. Petroleum Supply and Demand

	1977 Actual				
	1st Qtr.	2nd Qtr.	3rd Qtr.	4th Qtr.	Year
Thousands of barrels per day					
Supply					
Crude oil and lease condensate production	7,956	8,042	8,231	8,603	8,210
Natural gas plant liquids production	1,609	1,633	1,596	1,633	1,618
Other hydrocarbon supply	43	54	52	43	48
Crude oil imports	6,520	6,867	6,624	6,232	6,560
Refined products imports*	<u>2,813</u>	<u>1,836</u>	<u>2,110</u>	<u>1,881</u>	<u>2,157</u>
Total new supply	18,941	18,432	18,613	18,392	18,593
Processing gain	521	450	543	535	512
Stock change—all oils	<u>-278</u>	<u>+1,190</u>	<u>+1,177</u>	<u>+19</u>	<u>+530</u>
Total net supply	19,740	17,692	17,979	18,908	18,575
Unaccounted for crude oil**	+114	+88	+59	+47	+79
Demand					
Crude oil and refined products exports	210	245	259	208	231
Crude oil losses	15	15	16	16	16
Domestic demand for refined products***	<u>19,629</u>	<u>17,520</u>	<u>17,764</u>	<u>18,731</u>	<u>18,407</u>
Total demand	19,854	17,780	18,039	18,955	18,654

*Includes plant condensate and unfinished oils.

**Balancing item resulting from statistical inconsistencies.

***Includes international bunkers.

Note: 4th Quarter and Year 1977 data are preliminary.

Sources: 1st Quarter 1977—BOM *Mineral Industry Surveys*, "Petroleum Statement, Monthly;" 2nd, 3rd, and 4th Quarters 1977—BOM *Mineral Industry Surveys*, "Petroleum Statement, Monthly," Energy Information Administration (EIA) *Energy Data Reports*, "Petroleum Statement, Monthly," EIA "Monthly Petroleum Statistics Report," and EIA estimates.

Strategic Petroleum Reserve

		Crude Oil Deliveries*	Cumulative Deliveries	Average Delivered Price	Cumulative Average Delivered Price
		Barrels		Dollars per barrel	
1977	July	414,172	414,172	13.565	13.565
	August	0	414,172	—	—
	September	674,961	1,089,133	13.59	13.58
	October	1,539,263	2,628,396	14.22	13.95
	November	2,434,463	5,062,859	14.50	14.21
	December	2,455,466	7,518,325	14.58	14.33
1978	January	3,531,481	11,049,806	14.46	14.37
	February	3,058,683	14,108,489	14.38	14.37
	March	4,106,270	18,214,759	14.46	14.39

*Does not include cargoes in transit at the end of the reporting month, nor cargoes that discharged into Caribbean transshipment terminals for eventual transfer to SPRO terminals.

Source: U.S. Department of Energy, Strategic Petroleum Reserve Office.

Natural Gas

Domestic consumption of natural gas in March 1978 was an estimated 11.6 percent higher than in March 1977. Estimated consumption during the first 3 months of 1978 was 8.5 percent above that of January-March 1977, reflecting both colder weather and some substitution of gas in place of coal as stocks of the latter declined due to the prolonged strike by the United Mine Workers of America.

Marketed production of natural gas in March 1978 was an estimated 1.8 percent less than during the previous March, and estimated production in the first 3 months of 1978 was 2.0 percent below that for the same period in 1977. Last year, during much of the 3-month period, production was higher than normal due to the temporary suspension of restrictions limiting production from gas reservoirs on Outer Continental Shelf leases to the maximum efficient rate.

Imports of natural gas in March 1978 were an estimated 12.3 percent lower than the record monthly high posted during March 1977 when imports were supplemented by 18 billion cubic feet of emergency gas shipments from Canada. For the first 3 months of 1978, estimated imports were 4.3 percent lower than during the same period of 1977.

Working gas* in underground natural gas storage reservoirs at the end of March 1978 was 7.6 percent less than that available a year earlier. Net withdrawals from storage totaled 186 billion cubic feet in March 1978 in contrast to net injections totaling 55 billion cubic feet in March 1977.

Domestic producer sales to major interstate pipeline companies in January 1978 were 1.7 percent higher than in January 1977.

*Gas available for withdrawal.

Natural Gas

		Domestic Consumption*	Marketed Production*	Domestic Producer Sales to Major Interstate Pipelines	Imports
Billion cubic feet					
1972	TOTAL	22,102	22,532	12,429	1,019
1973	TOTAL	22,049	22,648	12,067	1,033
1974	TOTAL	21,223	21,601	11,462	959
1975	January	2,248	1,778	950	81
	February	1,939	1,640	867	75
	March	1,903	1,740	948	83
	April	1,575	1,677	906	82
	May	1,331	1,689	898	80
	June	1,257	1,634	859	76
	July	1,313	1,677	873	80
	August	1,369	1,677	882	75
	September	1,370	1,603	836	74
	October	1,544	1,646	877	80
	November	1,640	1,618	853	81
	December	2,049	1,730	903	86
	TOTAL	19,538	20,109	10,652	953
1976	January	2,291	1,751	894	84
	February	1,938	1,647	850	78
	March	1,721	1,714	894	85
	April	1,508	1,623	849	86
	May	1,434	1,673	860	82
	June	1,335	1,640	815	76
	July	1,372	1,676	822	73
	August	1,317	1,636	810	77
	September	1,302	1,565	793	74
	October	1,621	1,639	840	85
	November	1,875	1,635	841	81
	December	2,232	1,753	872	83
	TOTAL	19,946	19,952	10,140	964
1977	January	R2,386	R1,734	848	85
	February	1,793	1,668	807	85
	March	1,693	1,742	910	106
	April	1,408	1,634	830	82
	May	R1,352	R1,688	830	84
	June	1,311	1,643	789	76
	July	1,304	1,669	801	74
	August	1,343	1,639	784	78
	September	1,403	1,587	741	78
	October	1,490	1,620	831	85
	November	1,663	1,599	830	86
	December	2,082	1,719	882	90
	TOTAL	R19,228	R19,942	9,883	1,009
1978	January	R2,370	R**1,720	862	R87
	February	R2,110	**1,610	NA	**84
	March	1,890	**1,710	NA	**93
	TOTAL (3 months)	6,370	5,040	NA	264

*See Explanatory Note 5.

**Preliminary data.

R=Revised data.

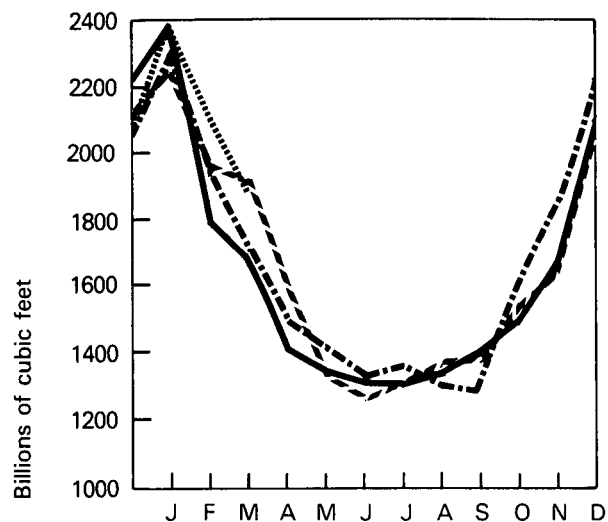
NA=Not available.

Note: All monthly Domestic Consumption data are estimated.

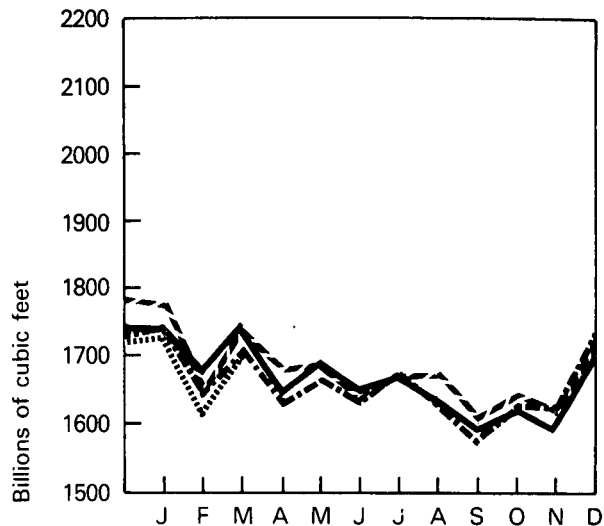
Sources: Domestic Consumption—EIA estimates; Marketed Production and Imports—Bureau of Mines *Mineral Industry Surveys*, "Natural Gas, Monthly" through June 1977 and EIA *Energy Data Reports*, "Natural Gas, Monthly" for July 1977 forward; Domestic Producer Sales—Federal Power Commission Form 11, "Monthly Statement of Gas Operating Revenues, Sales."

Natural Gas

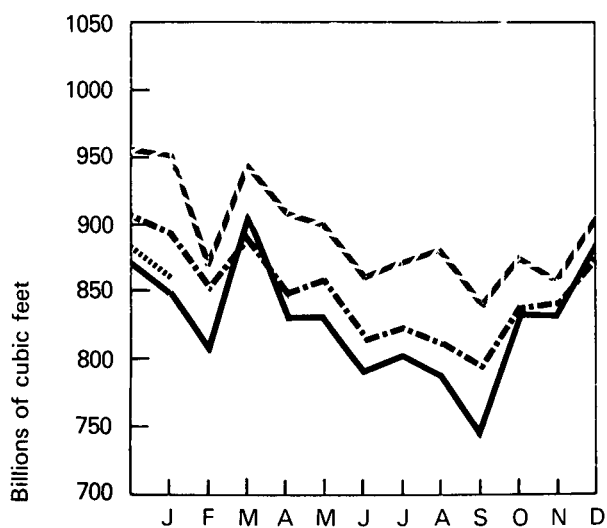
Domestic Consumption



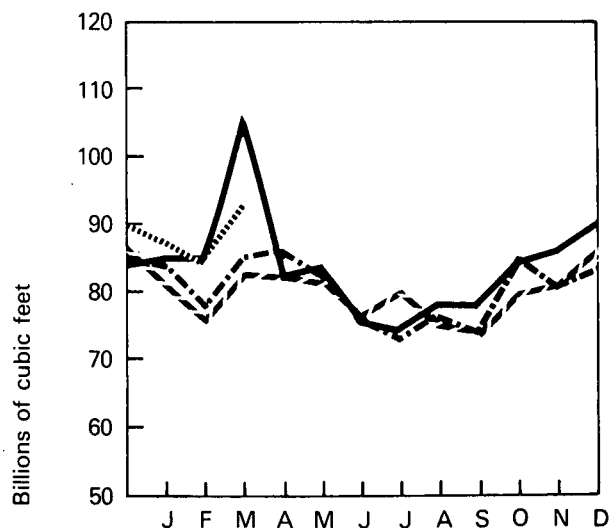
Marketed Production



Domestic Producer Sales to Major Interstate Pipelines



Imports



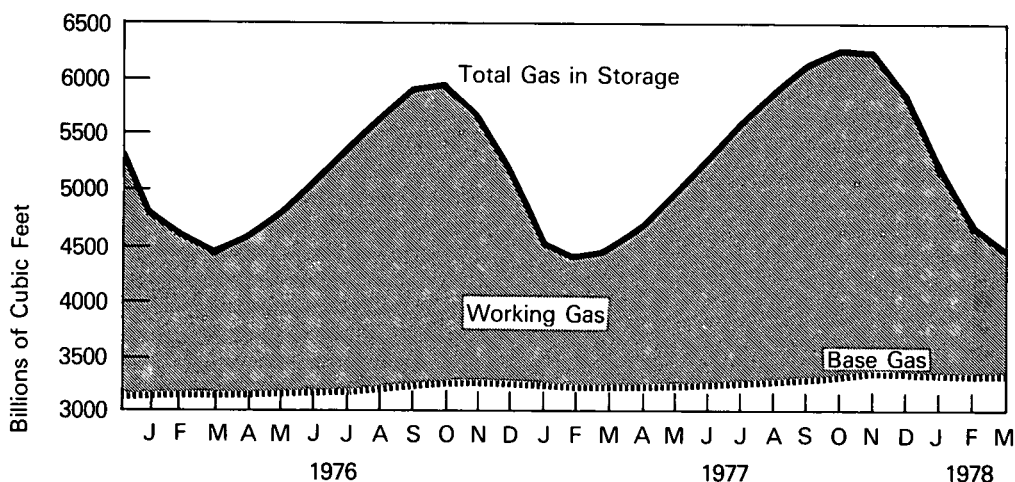
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Natural Gas (Continued)

Natural Gas in Underground Storage*

		Total Gas in Storage	Base Gas	Working Gas	Storage Injections	Storage Withdrawals	Net Storage Injections
		Billion cubic feet					
1975	September	5,553	3,085	2,468	220	31	189
	October	5,706	3,107	2,599	190	51	139
	November	5,691	3,150	2,541	98	146	-48
	December	5,358	3,150	2,208	38	371	-333
1976	January	4,817	3,169	1,648	17	526	-509
	February	4,617	3,173	1,444	66	265	-199
	March	4,496	3,170	1,326	79	200	-121
	April	4,607	3,184	1,423	185	75	110
	May	4,827	3,190	1,637	245	24	221
	June	5,116	3,208	1,908	304	27	277
	July	5,412	3,220	2,192	301	6	295
	August	5,698	3,251	2,447	298	17	281
	September	5,946	3,296	2,650	259	22	237
	October	5,966	3,302	2,664	135	116	19
	November	5,713	3,305	2,408	40	291	-251
	December	5,231	3,310	1,921	23	505	-482
1977	January	4,580	3,293	1,287	18	670	-652
	February	4,446	3,283	1,163	101	235	-134
	March	4,501	3,286	1,215	187	132	55
	April	4,713	3,286	1,427	256	43	213
	May	5,024	3,293	1,731	329	17	312
	June	5,330	3,300	2,030	317	12	305
	July	5,665	3,317	2,348	348	15	333
	August	5,945	3,346	2,599	290	21	269
	September	6,188	3,364	2,824	262	2	260
	October	6,302	3,373	2,929	157	44	113
	November	6,224	3,403	2,821	84	160	-76
	December	5,844	3,377	2,467	41	416	-375
1978	January	5,193	3,374	1,819	21	668	-647
	February	4,683	3,373	1,310	21	530	-509
	March	4,497	3,374	1,123	92	278	-186

Gas in Storage



*See Explanatory Note 6.

Sources: Federal Energy Administration Form G318-M-O and Federal Power Commission Form 8 "Underground Gas Storage Report."

Coal

Bituminous coal and lignite production increased from 23.5 million tons in February 1978 to 38.8 million tons in March. Coal production increased to 11.9 million tons during the final week of March as most striking members of the United Mine Workers of America returned to work on March 27. Production increased to 14.1 million tons for the week ending April 8 and to 15.1 million tons for the week ending April 15. Coal production in the first quarter of 1978 totaled 85.4 million tons, 46.6 percent less than production in the first quarter of 1977.

The United States exported only 400,000 tons of bituminous coal in March 1978 and only 1.8 million tons during the first quarter of 1978. By comparison, exports of bituminous coal in the first quarter of 1977 were 8.6 million tons.

Domestic consumption of bituminous coal and lignite totaled 44.5 million tons in March 1978, down 11.5 percent from the amount consumed during March 1977. In the first quarter of 1978, domestic coal consumption was 144.7 million tons, 7.8 percent below consumption during the first quarter of 1977. Electric utility coal consumption* was 34.3 million tons in March 1978 compared with 37.2 million tons in March 1977. Electric utilities consumed 112.6 million tons in the first 3 months of 1978, more than 5 million tons less than the amount consumed in the same period a year earlier. The second largest coal consuming sector, steel company coke plants, used 4.0 million tons in March 1978, nearly 3 million tons less than in March 1977. In the first quarter of 1978, coal consumption by coke plants amounted to 13.6 million tons, 6.0 million tons below the 1977 first quarter level. Coal consumption in the general industrial sector totaled 15.8 million tons for the first quarter of 1978, 1.2 million tons less than in the first quarter 1977. The balance was consumed through retail sales.

As a result of the coal strike, stocks of bituminous coal and lignite held by utilities and industrial consumers were drawn down by 70.3 million tons during the first quarter of 1978. Electric utility stocks* declined from 131.0 million tons at the first of the year to 73.0 million tons on March 31. Stocks of coking coal were 3.4 million tons on March 31, 9.3 million tons less than at the beginning of the year. Coal stocks held by general industry declined from 8.2 million tons to 5.2 million tons during the first quarter of 1978.

*Does not include anthracite or coke consumption/stocks.

Bituminous and Lignite

		Domestic Consumption*	Production*	Exports	Stocks**
		Thousands of short tons			
1972	TOTAL	516,776	595,386	55,997	115,372
1973	TOTAL	556,022	591,738	52,870	103,022
1974	TOTAL	552,709	603,406	59,926	95,528
1975	January	49,841	55,610	4,254	95,512
	February	45,699	51,135	4,470	97,028
	March	47,202	51,910	5,653	97,832
	April	43,537	56,330	6,159	102,663
	May	42,658	57,045	7,011	109,666
	June	44,777	55,730	6,269	114,857
	July	47,454	45,560	4,691	109,133
	August	49,190	51,160	5,859	108,522
	September	44,032	56,060	4,529	111,922
	October	44,929	60,030	4,647	120,344
	November	45,946	54,655	7,593	125,808
	December	51,036	53,213	4,534	127,115
	TOTAL	556,301	648,438	65,669	
1976	January	52,932	52,568	3,697	119,220
	February	46,832	53,773	3,050	119,004
	March	48,624	60,918	3,979	123,471
	April	46,415	59,145	5,780	128,393
	May	46,681	57,934	5,667	136,013
	June	48,445	59,680	6,569	140,144
	July	51,717	44,318	4,880	129,661
	August	52,082	53,622	4,223	123,853
	September	47,689	60,634	5,614	129,878
	October	49,312	58,899	5,871	133,624
	November	51,877	58,780	5,451	135,019
	December	56,144	58,414	4,625	133,555
	TOTAL	598,750	678,685	59,406	
1977	January	56,561	R44,525	2,143	118,116
	February	50,033	R49,045	3,079	114,363
	March	50,278	R66,445	3,390	122,593
	April	46,290	R60,280	5,637	129,878
	May	49,120	R62,220	5,673	137,673
	June	51,690	R62,810	6,019	145,914
	July	56,141	R49,425	5,158	137,463
	August	54,758	R57,560	4,279	136,832
	September	50,622	R69,200	5,037	144,953
	October	50,191	R67,420	4,871	158,164
	November	50,245	R68,715	4,491	173,063
	December	53,687	R30,930	3,910	152,317
	TOTAL	619,616	R688,575	53,687	
1978	January	R54,405	R23,115	870	R118,121
	February	45,778	R23,520	R555	R93,900
	March	***44,495	38,765	***400	***82,000
	TOTAL (3 months)	145,678	85,400	1,825	

*See Explanatory Note 7.

**Total stocks held by utilities, industrial consumers, and retail dealers at end of year or month.

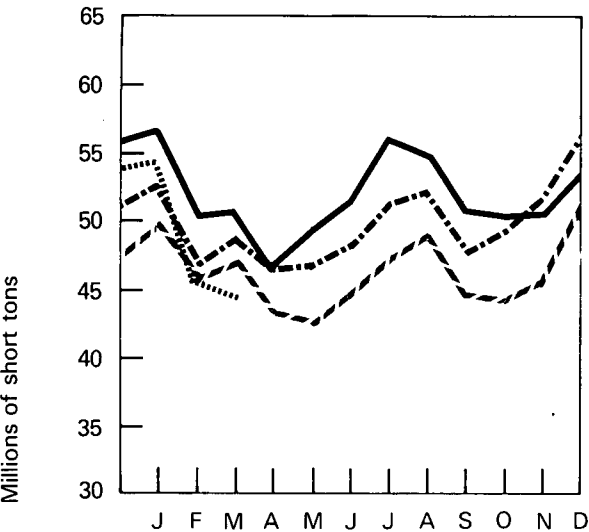
***Estimated.

R=Revised data.

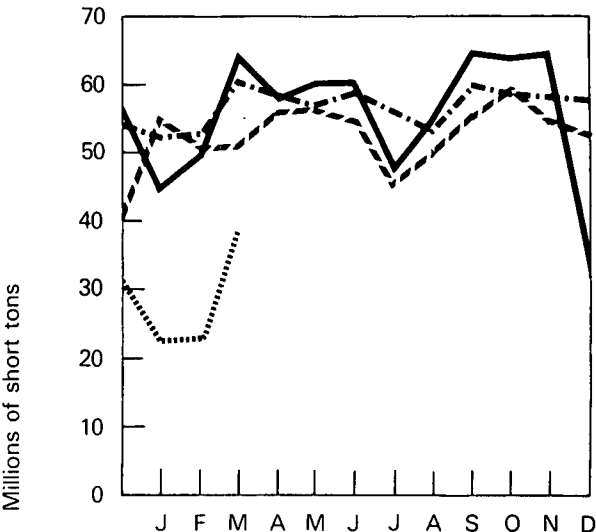
Source: Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report" through September 1977; and EIA *Energy Data Reports*, "Weekly Coal Report" for October 1977 forward.

Bituminous and Lignite

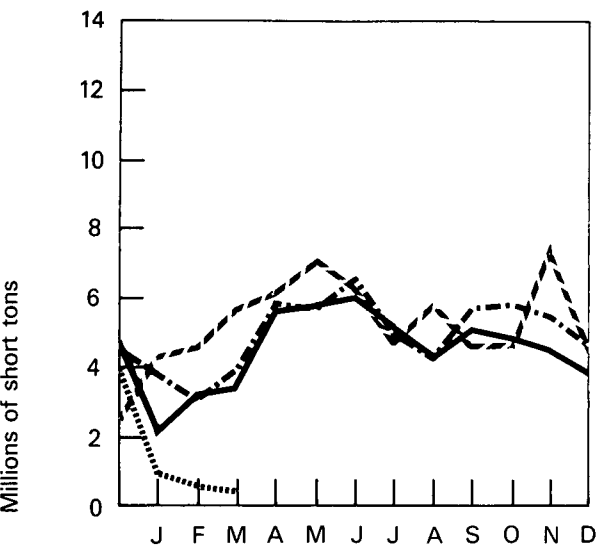
Domestic Consumption



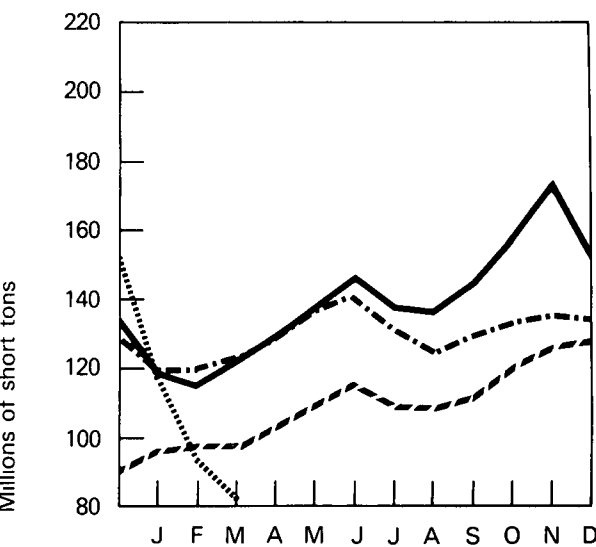
Production



Exports



Stocks

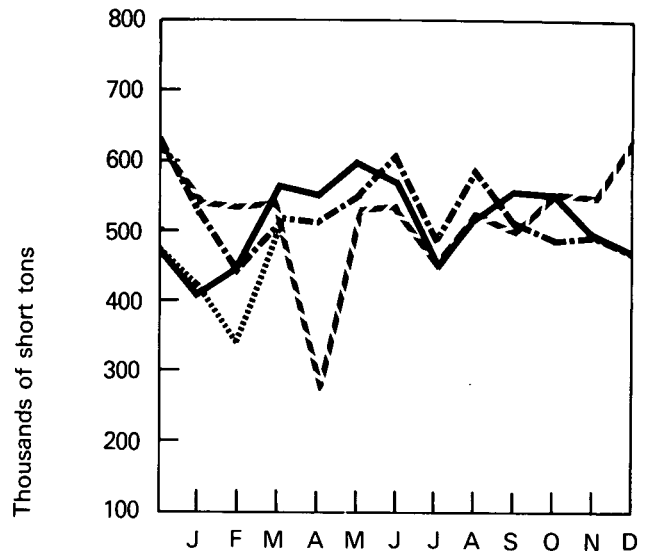


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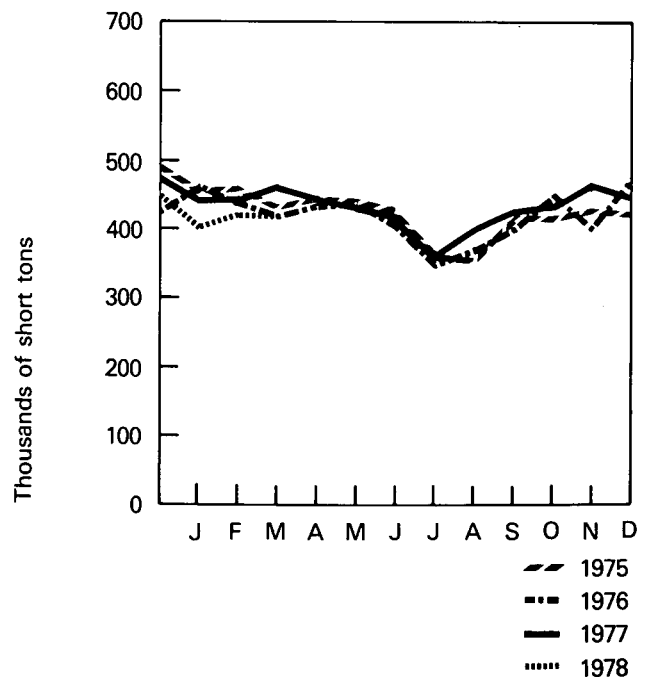
Anthracite

		Production	Apparent Domestic Consumption
		Thousands of short tons	
1972	TOTAL	7,106	5,915
1973	TOTAL	6,830	5,671
1974	TOTAL	6,617	5,448
1975	January	540	459
	February	535	465
	March	544	435
	April	270	450
	May	535	445
	June	544	430
	July	455	360
	August	535	356
	September	500	425
	October	560	420
	November	555	435
	December	630	428
	TOTAL	6,203	5,108
1976	January	525	460
	February	440	430
	March	525	420
	April	520	435
	May	555	440
	June	610	400
	July	490	350
	August	590	375
	September	515	400
	October	490	455
	November	493	400
	December	475	475
	TOTAL	6,228	5,040
1977	January	400	440
	February	450	450
	March	570	470
	April	550	450
	May	600	440
	June	570	420
	July	450	360
	August	525	400
	September	560	430
	October	550	435
	November	500	470
	December	475	450
	TOTAL	6,200	5,215
1978	January	430	400
	February	340	425
	March	500	420
	TOTAL (3 months)	1,270	1,245

Production



Apparent Domestic Consumption



Source: Bureau of Mines *Mineral Industry Surveys*, "Weekly Coal Report" through September 1977; and EIA *Energy Data Reports*, "Weekly Coal Report" for October 1977 forward.

Electric Utilities

Utility production of electricity in February 1978 totaled 173.7 billion kilowatt hours, 6.7 percent above the level for February 1977. Total production during the first 2 months of 1978 was 3.1 percent above that for the same period in 1977. Edison Electric Institute has estimated March 1978 production at 172.4 billion kilowatt hours.

Electric utility consumption of coal,* oil, and gas during February 1978 was 35.9 million tons, 67.3 million barrels, and 210.7 billion cubic feet, respectively, representing increases of 32.5 percent for oil and 5.2 percent for gas, and a decrease of 4.7 percent for coal, when compared to consumption in the same month of 1977. The decrease in coal consumption was a result of conservation and switching to alternate fuels as the strike by the United Mine Workers of America continued throughout February.

Coal stocks* at electric utilities on February 28, 1978, were 84.7 million tons, 17.9 percent below the February 28, 1977, level. Oil stocks were 127.0 million barrels at the end of the month, an increase of 15.4 percent over the stock level for the same period in 1977.

Sales of electricity to ultimate industrial customers during January 1978 totaled 70.5 billion kilowatt hours, 14.6 percent above the level for January 1977. Sales to ultimate residential customers increased 0.3 percent to 65.5 billion kilowatt hours. Sales to ultimate commercial customers totaled 37.9 billion kilowatt hours, up 0.9 percent from the level of 1 year earlier.

The primary cause of the increase in ultimate industrial sales of electricity are a 1.1-percent increase in industrial production** coupled with a 5.5-percent increase in the number of industrial customers reported by Class A and B utilities.*** The increase in residential sales was the result of a 2.2-percent increase in the number of residential customers. A major factor affecting the growth in ultimate commercial

sales was a 2.0-percent increase in the number of Class A and B commercial electricity customers.

*Utility coal consumption and stocks include bituminous and anthracite coal, lignite, and coke.

**Industrial production is based on information obtained from the Federal Reserve Bulletin.

***See Explanatory Note 8.

Electric Utilities

Net Electricity Production

		Coal	Oil	Gas	Nuclear	Hydro-electric	Other*	Total
		Millions of kilowatt hours						
1971	TOTAL	714,680	218,622	374,027	38,105	266,301	859	1,612,593
1972	TOTAL	772,857	272,550	375,735	54,091	272,612	1,783	1,749,629
1973	TOTAL	848,988	312,940	340,804	83,334	272,081	2,294	1,860,440
1974	TOTAL	829,973	299,363	320,055	113,976	301,032	2,704	1,867,103
1975	January	74,860	30,608	19,689	13,938	25,011	219	164,325
	February	67,301	24,905	18,049	12,733	23,886	206	147,080
	March	69,188	23,111	20,099	14,882	27,970	231	155,481
	April	64,465	21,246	20,323	13,327	26,624	231	146,217
	May	64,749	21,046	25,707	13,764	27,713	255	153,231
	June	70,362	23,047	28,830	12,745	27,143	316	162,442
	July	76,314	25,113	34,181	15,372	25,522	313	176,815
	August	78,895	27,944	34,041	15,880	22,612	341	179,714
	September	68,575	21,410	30,020	14,396	20,519	302	155,223
	October	69,057	21,980	26,296	14,626	22,639	346	154,944
	November	70,440	21,598	21,830	14,164	24,429	333	152,794
	December	78,762	26,904	20,706	16,679	25,978	345	169,372
	TOTAL	852,968	288,908	299,772	172,506	300,047	3,437	1,917,638
1976	January	83,707	32,214	19,895	16,099	26,070	344	178,329
	February	73,532	24,767	19,163	14,377	24,521	323	156,683
	March	76,570	25,420	21,282	13,993	26,563	346	164,174
	April	72,571	23,299	21,867	10,982	24,137	312	153,168
	May	72,512	21,794	25,319	11,929	25,516	300	157,370
	June	76,939	25,103	29,715	15,757	25,563	314	173,391
	July	83,294	26,997	32,032	17,709	26,064	338	186,434
	August	84,222	28,248	31,394	18,363	23,843	336	186,406
	September	75,384	23,608	28,058	17,290	20,369	327	165,036
	October	76,955	24,168	23,918	17,355	21,042	319	163,757
	November	81,702	30,060	21,119	16,134	19,805	293	169,113
	December	87,220	34,130	20,897	21,115	20,220	332	183,914
	TOTAL	944,608	319,808	294,659	191,103	283,713	3,884	2,037,775
1977	January	89,844	43,363	19,953	R22,152	20,700	359	R196,371
	February	78,752	29,429	19,480	19,601	15,150	322	162,734
	March	R77,520	R28,344	22,464	20,672	19,801	356	R169,157
	April	70,898	25,834	21,297	R19,867	18,642	319	R156,857
	May	77,071	27,945	R24,706	R20,599	18,677	341	R169,339
	June	83,152	28,948	R29,622	R21,517	17,226	335	R180,800
	July	92,408	34,866	R32,714	21,825	16,798	328	R198,939
	August	90,764	32,302	R33,293	R22,750	16,712	317	R196,138
	September	82,593	26,348	R30,946	R19,630	16,455	342	R176,314
	October	79,406	23,061	27,360	R19,041	17,220	360	R166,448
	November	79,495	24,848	22,602	R19,458	20,428	347	R167,178
	December	R83,614	R32,647	R21,167	23,771	22,787	337	R184,323
	TOTAL	R985,517	R357,935	R305,604	R250,883	220,596	4,063	R2,124,598
1978	January	R85,433	R38,780	R22,360	R24,718	R24,981	357	R196,629
	February	70,694	38,103	20,321	R21,833	22,416	309	R173,676
	March	NA	NA	NA	22,610	NA	NA	172,415
	TOTAL (3 months)	NA	NA	NA	69,161	NA	NA	542,720

(See chart on page 39)

*Includes electricity produced from geothermal power, wood, and waste.

R=Revised data.

NA=Not available.

Source: Federal Power Commission Form 4, "Monthly Powerplant Report" through February 1978; Edison Electric Institute for March 1978 Total and Nuclear Regulatory Commission for March 1978 Nuclear.

Electric Utilities (Continued)

Fuel Consumption

		Coal	Oil			Gas
		Thousands of short tons	Steam*	Gas Turbine/ Internal Combustion** Thousands of barrels	Total	Millions of cubic feet
1971	TOTAL	327,887	362,186	34,282	396,468	3,975,971
1972	TOTAL	352,392	440,229	53,463	493,692	3,976,770
1973	TOTAL	389,707	513,127	47,020	560,147	3,659,388
1974	TOTAL	392,423	482,524	53,721	536,245	3,443,293
1975	January	35,843	48,678	5,370	54,048	205,095
	February	32,097	39,794	3,750	43,544	188,922
	March	32,793	37,408	3,007	40,415	211,184
	April	30,547	34,702	2,335	37,037	214,250
	May	30,574	33,720	3,266	36,986	275,097
	June	33,457	36,825	4,118	40,943	307,901
	July	36,567	40,520	3,893	44,413	362,088
	August	37,967	44,565	4,755	49,320	360,199
	September	32,609	35,124	1,917	37,041	315,877
	October	32,853	36,137	1,893	38,030	275,266
	November	33,333	35,743	1,794	37,537	227,748
	December	37,390	43,724	3,090	46,814	213,957
	TOTAL	406,030	466,940	39,188	506,128	3,157,584
1976	January	39,986	51,114	4,974	56,088	206,528
	February	34,965	40,452	2,676	43,128	199,441
	March	36,099	41,154	2,800	43,954	222,765
	April	33,805	37,663	2,489	40,152	227,826
	May	33,944	35,651	2,220	37,871	266,632
	June	36,381	40,065	3,574	43,639	313,369
	July	39,841	43,143	4,084	47,227	337,640
	August	40,330	45,627	3,443	49,070	329,737
	September	35,895	38,245	2,526	40,771	295,071
	October	36,783	39,101	3,106	42,207	250,046
	November	38,845	47,346	4,971	52,317	217,362
	December	41,582	53,949	5,564	59,513	214,869
	TOTAL	448,456	513,510	42,427	555,937	3,081,286
1977	January	43,255	66,250	9,646	75,896	205,072
	February	37,645	47,603	3,206	50,809	200,407
	March	37,218	46,069	R2,599	R48,668	231,790
	April	34,051	42,138	2,294	44,432	R223,081
	May	37,159	44,714	3,911	48,625	R259,857
	June	40,151	46,140	4,414	50,554	R310,701
	July	44,977	54,525	7,881	62,406	R346,466
	August	44,172	51,782	4,815	R56,597	R350,755
	September	40,168	43,190	2,631	45,821	R324,680
	October	38,379	38,012	1,959	R39,971	284,847
	November	R38,722	40,567	2,555	43,122	R234,244
	December	R41,298	R52,655	R4,185	R56,840	R219,979
	TOTAL	R477,195	R573,645	50,096	R623,741	R3,191,879
1978	January	R42,936	R60,337	R8,510	R68,847	R229,772
	February	35,880	59,634	7,691	67,325	210,736
	TOTAL (2 months)	78,816	119,971	16,201	136,172	440,508

*Primarily residual fuel oil.

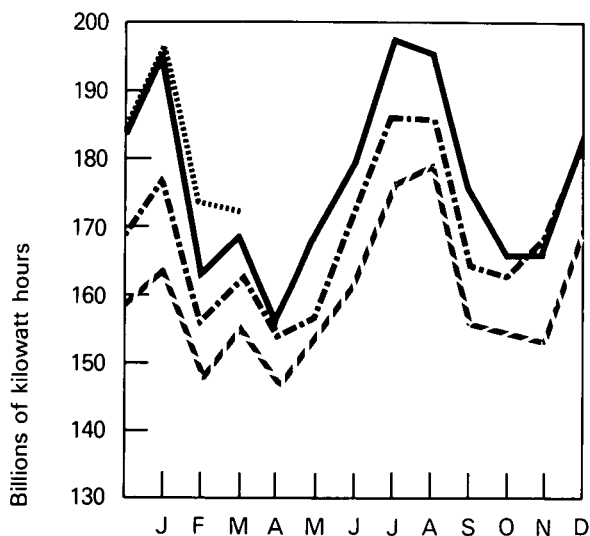
**Primarily middle distillates.

R=Revised.

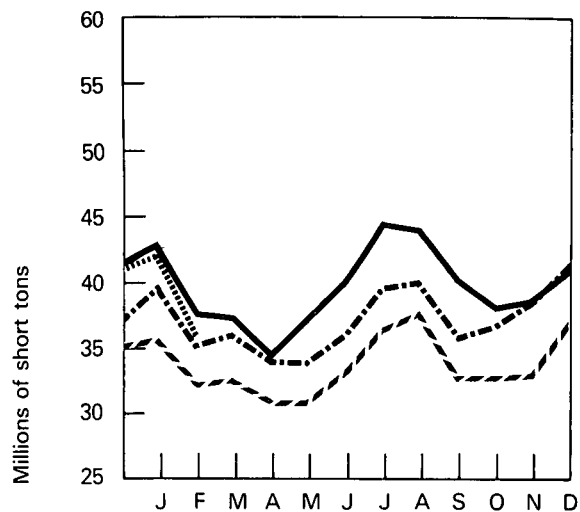
Source: Federal Power Commission Form 4, "Monthly Powerplant Report."

Electric Utilities

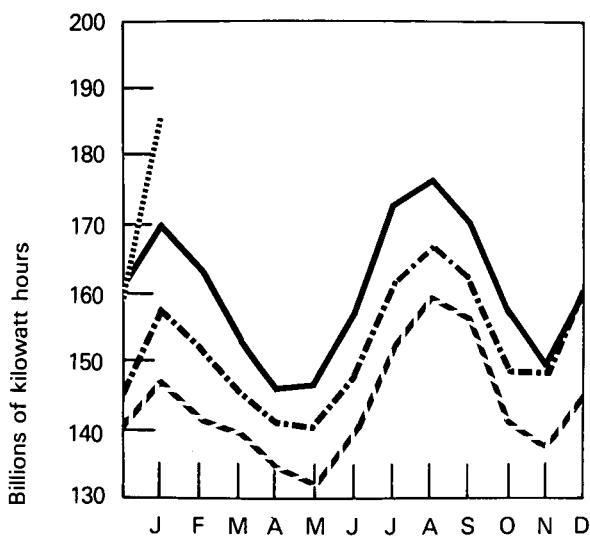
Total Net Electricity Production



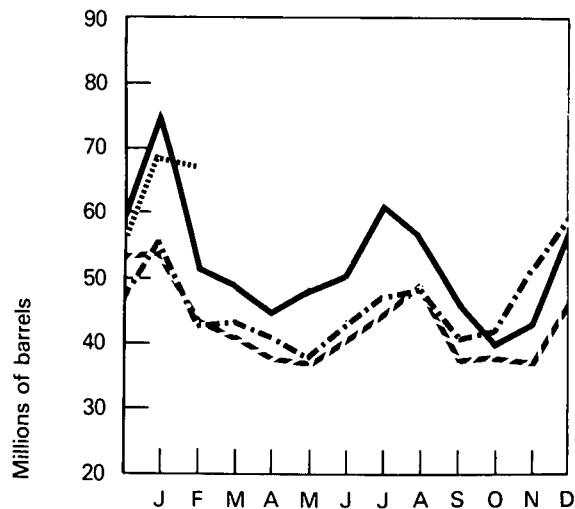
Coal Consumption



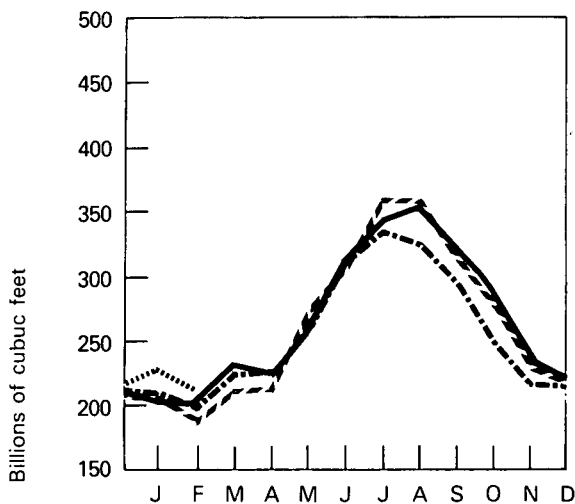
Total Electricity Sales



Oil Consumption



Gas Consumption



--- 1975 --- 1976 — 1977 1978

Electric Utilities (Continued)

Stocks at End of Month

		Coal	Oil		
			Steam*	Gas Turbine/ Internal Combustion**	Total
		Thousands of short tons	Thousands of barrels		
1971		***78,069	***46,451	***3,194	***49,645
1972		***100,009	***52,575	***5,079	***57,654
1973		***87,279	***79,121	***10,095	***89,216
1974		***83,542	***97,201	***15,715	***112,916
1975	January	82,088	95,579	15,716	111,295
	February	80,972	95,762	15,738	111,500
	March	81,885	97,333	16,310	113,643
	April	86,829	98,004	16,294	114,298
	May	93,869	101,464	15,767	117,231
	June	98,031	103,222	15,714	118,936
	July	94,278	105,334	15,905	121,239
	August	94,213	104,926	15,739	120,665
	September	98,096	109,678	16,635	126,313
	October	105,415	112,107	16,774	128,881
	November	110,313	113,231	17,110	130,341
	December	110,750	108,358	16,886	125,244
1976	January	105,518	102,023	15,922	117,945
	February	104,874	102,147	16,706	118,853
	March	108,450	104,082	16,467	120,550
	April	112,862	103,757	16,642	120,399
	May	119,611	109,142	16,962	126,105
	June	123,048	109,660	16,621	126,281
	July	115,204	110,829	15,862	126,691
	August	110,752	109,823	16,007	125,830
	September	115,399	112,965	17,059	130,024
	October	118,591	114,437	16,954	131,391
	November	119,323	111,137	15,517	126,655
	December	117,493	106,744	14,980	121,724
1977	January	106,183	89,877	12,966	102,843
	February	103,262	95,641	14,390	110,031
	March	109,620	97,845	R15,781	R113,626
	April	115,915	101,502	R16,116	117,618
	May	122,834	103,802	16,134	119,936
	June	128,817	107,662	R15,913	R123,575
	July	123,405	112,937	R16,346	R129,283
	August	123,856	119,300	R17,392	R136,692
	September	130,380	125,064	R18,159	R143,223
	October	139,705	128,158	R19,422	R147,580
	November	R149,731	129,419	R19,431	R148,850
	December	R133,288	R124,958	R19,603	R144,561
1978	January	R104,395	R113,686	R16,855	R130,541
	February	84,746	108,038	18,951	126,989

*Primarily residual fuel oil.

**Primarily middle distillates.

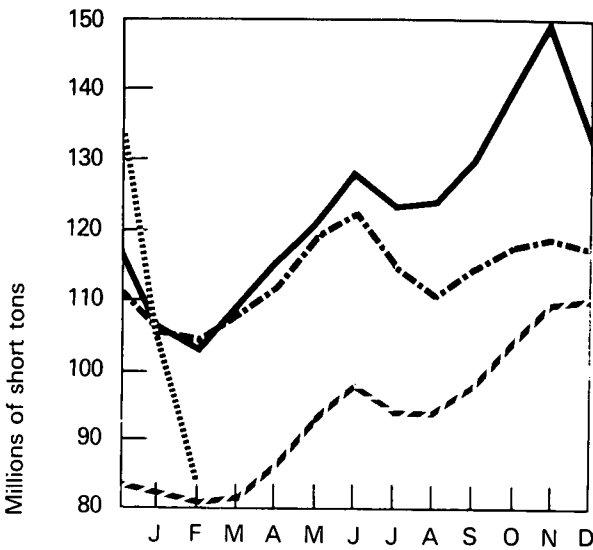
***As of December 31.

R=Revised.

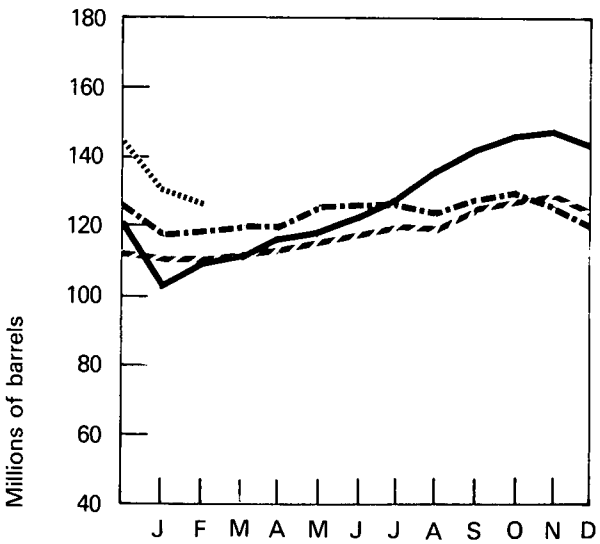
Source: Federal Power Commission Form 4, "Monthly Powerplant Report."

Electric Utilities

Coal Stocks



Oil Stocks



--- 1975
-.- 1976
— 1977
..... 1978

Electric Utilities (Continued)

Electricity Sales*

		Residential	Commercial	Industrial	Other**	Total
		Millions of kilowatt hours				
1972	TOTAL	538,609	359,265	640,978	56,309	1,595,161
1973	TOTAL	579,231	388,266	686,085	59,326	1,712,909
1974	TOTAL	578,184	384,826	684,875	58,039	1,705,924
1975	January	54,003	32,405	55,505	5,954	147,867
	February	50,219	31,459	54,328	5,544	141,550
	March	47,968	31,194	54,437	5,639	139,238
	April	44,762	30,473	53,910	5,269	134,414
	May	41,077	30,926	54,767	5,404	132,174
	June	45,766	R34,655	R55,841	5,384	R141,646
	July	53,972	37,631	55,524	5,644	152,771
	August	57,291	38,576	57,868	5,709	159,444
	September	54,362	37,325	58,619	5,978	156,284
	October	43,024	32,817	58,815	5,745	140,401
	November	42,054	31,608	58,223	5,976	137,861
	December	50,213	32,596	57,433	5,907	146,149
	TOTAL	584,711	R401,665	R675,270	68,153	R1,729,799
1976	January	60,126	34,955	57,463	6,359	158,903
	February	54,264	33,809	58,064	5,855	151,992
	March	47,041	32,520	60,322	5,967	145,850
	April	43,563	31,813	59,967	5,386	140,729
	May	41,044	32,538	61,133	5,473	140,188
	June	44,131	35,325	62,654	5,371	147,481
	July	53,702	39,489	62,388	5,856	161,435
	August	57,349	39,933	63,921	5,829	167,032
	September	53,459	38,817	64,382	6,125	162,783
	October	44,751	34,981	64,028	5,649	149,409
	November	46,682	33,622	63,002	5,802	149,108
	December	56,751	35,838	62,640	5,886	161,115
	TOTAL	602,863	423,640	739,964	69,558	1,836,025
1977	January	R65,332	R37,598	R61,481	R6,274	R170,685
	February	61,492	35,969	60,687	5,549	163,697
	March	50,374	33,660	63,275	5,748	153,057
	April	44,564	33,051	63,583	5,078	146,276
	May	41,497	34,111	65,559	5,240	146,407
	June	49,438	37,601	66,073	5,595	158,707
	July	60,955	41,745	64,708	5,935	173,343
	August	62,440	42,433	66,521	5,837	177,231
	September	57,231	40,845	66,579	5,951	170,606
	October	48,696	36,547	66,442	5,979	157,664
	November	44,962	33,979	64,959	5,866	149,766
	December	55,101	36,047	63,809	6,083	161,040
	TOTAL	R642,082	R443,586	R773,676	R69,135	R1,928,479
1978	January	65,547	37,942	70,472	6,584	180,545

(See chart on page 39)

*Electricity sales to ultimate consumers.

**Includes street lighting and transportation uses.

R=Revised.

Source: Federal Power Commission Form 5, "Monthly Statement of Electric Operating Revenue and Income."

Nuclear Power

The 65 fully operable domestic nuclear reactors in the United States (including two units owned by the U.S. Department of Energy), with a maximum dependable capacity of 45,744 electrical megawatts,* performed at 66 percent of capacity during March 1978. Total electricity generated by these reactors amounted to 22.6 billion net kilowatt hours, which was 13.1 percent of total net domestic electricity production for March.

In late March, the Nuclear Regulatory Commission (NRC) accepted an application by the Arizona Public Service Company for construction of units 4 and 5 of the Palo Verde nuclear project located near Wintersburg, Arizona. These units, planned for operation in 1988 and 1989, will complete a large 5-unit site with a capacity in excess of 6,400 megawatts. Construction has already begun on the first two units of this site with completion scheduled for late 1984.

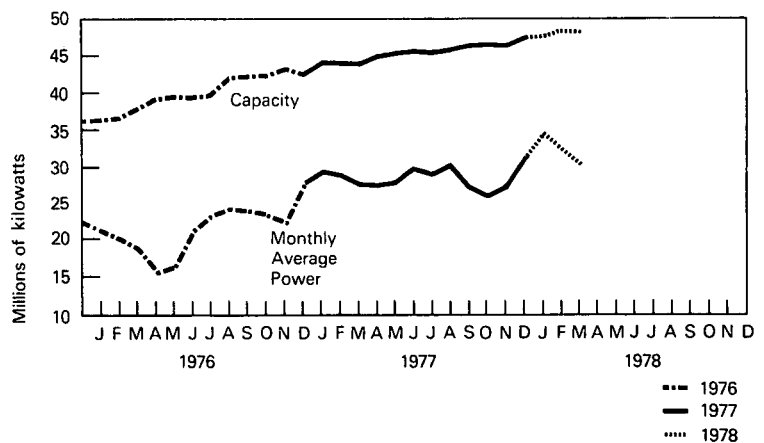
Also in March, a special "Task Force Report For Review of Nuclear Waste Management" was released by the U.S. Department of Energy. The report presents an overview of current nuclear waste programs, relevant issues yet to be resolved, and various alternative actions for consideration. Among other findings, the report concludes that high-level nuclear waste can be safely disposed of in geologic formations, but the earliest completion date for such repositories would be 1988. The report also states that, "Reprocessing is not required for safe disposal of commercial spent fuel," and that repositories may be designed to accommodate either commercial spent fuel or high-level wastes. Further, the report recommends that the Federal Government be responsible for ultimate disposal of all forms of nuclear waste, and that long-term storage facilities be subject to NRC regulation.

*Does not include three units in startup testing having a total capacity of 2,318 electrical megawatts.

U.S. Nuclear Powerplant Operations*

		Maximum Dependable Capacity	Average Power	Percent of Total Domestic Electricity Generation
Thousands of net kilowatts				
1972 AVERAGE		7,726	6,174	3.1
1973 AVERAGE		13,850	8,760	4.5
1974 AVERAGE		29,921	13,011	6.1
1975	January	35,691	18,734	8.5
	February	35,899	18,948	8.7
	March	35,686	20,003	9.6
	April	35,017	18,510	9.1
	May	35,017	18,500	9.0
	June	35,322	17,701	7.8
	July	35,596	20,661	8.7
	August	35,589	21,344	8.8
	September	35,540	19,994	9.3
	October	35,540	19,659	9.4
	November	36,752	19,672	9.3
	December	36,424	22,418	9.9
AVERAGE		35,671	19,692	9.0
1976	January	36,750	21,638	9.0
	February	36,879	20,657	9.2
	March	38,072	18,808	8.5
	April	39,763	15,142	7.2
	May	39,902	16,034	7.6
	June	39,781	21,885	9.1
	July	40,168	23,802	9.5
	August	42,067	24,681	9.8
	September	42,896	24,014	10.5
	October	42,877	23,327	10.6
	November	43,673	22,408	9.5
	December	42,877	28,380	11.5
AVERAGE		40,642	21,756	9.4
1977	January	44,316	R29,774	11.3
	February	44,282	29,168	12.0
	March	44,289	27,785	12.2
	April	45,131	R27,631	12.7
	May	45,222	R27,687	R12.2
	June	45,991	R29,885	R11.9
	July	45,984	29,335	11.0
	August	45,982	R30,578	11.6
	September	46,051	R27,264	11.1
	October	46,088	R25,593	11.4
	November	46,088	R27,025	R11.6
	December	47,133	R31,350	12.9
AVERAGE		45,554	R28,640	11.8
1978	January	47,167	R33,223	R12.6
	February	R48,080	R32,490	12.6
	March	**48,062	**30,390	**13.1
AVERAGE		47,759	32,019	12.7
	(3 months)			

U.S. Nuclear Powerplants



*Includes all units authorized to generate commercial electricity, including units in startup testing and those owned by the Government.

**Preliminary data.

R=Revised data.

Sources: Capacity data for units in commercial operation or startup testing and Average Power for March 1978 from Nuclear Regulatory Commission. Remaining data from U.S. Department of Energy.

Status of Nuclear Powerplants—March 31, 1978

Status	Number of Plants					Design Capacity
	Boiling Water Reactors	High Temperature Gas Reactors	Pressurized Water Reactors	Other**	Total	Net Electrical Megawatts
In operation or startup testing*	25	1	41	2	69	50,000
Construction permit granted	29	0	57	0	86	94,000
Construction permit pending	8	0	34	3	45	51,000
Orders placed for plant	3	0	8	0	11	13,000
Publicly announced	—	—	—	9	9	11,000
TOTAL	65	1	140	14	220	219,000

*Does not include the Indian Point 1 reactor which is in indefinite shutdown status and was previously reported as licensed to operate. Includes the North Anna 1 reactor which has been authorized to load fuel, but restricted from generating electricity.

**Includes two dual-purpose Department of Energy-owned reactors, both operating and not previously reported. Also includes 1 Liquid Metal Fast Breeder Reactor and 11 announced intentions to order for which a reactor type has not been chosen.

Source: U.S. Department of Energy.

Nuclear Power Generation by Non-Communist Countries—March 1978

Country	Number of Reactors*	Capacity Thousands of gross electrical kilowatts	Electricity Generation Millions of gross kilowatt hours	Generation of Electricity Percent of Design Capacity Used			
				March 1978	Year**		
					1975	1976	1977
Asia							
Japan	14	7,990	2,756	46	46	57	41
India	3	620	164	36	46	58	51
Pakistan	1	140	46	45	46	41	28
Taiwan	1	640	136	30	—	—	—
Europe							
Belgium	3	1,740	708	55	83	65	78
England***	31	8,100	4,132	61	57	62	55
Finland	1	440	18	5	—	—	92
France	12	4,930	2,474	67	68	59	52
Germany (FR)	10	6,410	3,871	81	72	57	64
Italy	3	630	342	73	69	69	61
Netherlands	2	520	369	95	73	84	81
Spain	3	1,120	663	80	77	77	67
Sweden	6	3,850	2,530	88	44	55	59
Switzerland	3	1,060	791	100	84	85	87
North America							
Canada†	†8	4,780	2,048	64	64	80	76
United States	67	50,430	23,793	63	56	55	64
South America							
Argentina	1	370	138	51	85	86	55
Total or Average	169	93,780	44,979	64	58	59	62

*Includes fully operational units and those in startup testing which generated electricity during, or prior to, the current month. Capacity and generation figures are shown as gross values, as opposed to net values shown in previous tables of this chapter.

**Averages are computed for those units in operation, including startup units beginning with first month of electricity generation.

***March figures for 21 units are based on a 5-week period; figures for remaining units are for 31 days.

†March figures are based on 4-week period.

Source: *Nucleonics Week* magazine.

U.S. Uranium Enrichment—March 1978

	Domestic Customers	Foreign Customers	Total
Separative work performed (in metric tons of separative work units)	285.371	1,501.118	1,786.489
Cost (in millions of dollars)	19.918	105.328	125.247
Product quantity (in metric tons of uranium)	374.421	60.724	435.145
Feed requirement (in metric tons of uranium)	1,939.827	354.184	2,294.011

Source: U.S. Department of Energy.

Summary of Monthly Fuel Cycle—February 1978

Fuel Cycle Activity	Product	Processed Material ¹ MTU except where noted	Percent Utilization of Industry Capacity	Energy Content of Processed Material ² Billion Btu	Energy Consumed in Fuel Cycle Activity ³ Billion Btu	Cost Contribution to Electric Power ⁴ Mills per kilowatt hour
Milling	Yellowcake (U ₃ O ₈) Deliveries	856	82	311,000	469	1.27
Conversion	Uranium Hexa- fluoride (UF ₆) Deliveries	852	⁵ 59	291,000	128	0.16
Enrichment	Enriched UF ₆ Deliveries	145 (560 MT-SWU)	(⁶)	297,000	1,321	1.53
Fabrication	Finished Fuel Assemblies Shipped	118	NA	241,000	32	0.47
Powerplant Operation	Electricity Generated	21,495 (million kWhe)	69	236,000	1,230 (million kWhe)	10.93
Spent Fuel	Stored at Reactor Site	NA	—	—	—	71.57
	Stored at Non-Reactor Sites	3	—	—	—	

¹ Units of measure are discussed in Explanatory Notes 9 and 10.

² Assumes 25,000 MWD/MTU for heat content of enriched uranium and a 6.1 feed to product ratio at the enrichment plant.

³ Energy requirements for processing are obtained from U.S.A.E.C. Report No. WASH 1248.

⁴ Cost contribution is computed from unit prices paid for current month's production and requirement for a model 1000 MWe reactor operating at 65 percent capacity factor. Because of the long lead time required for nuclear fuel processing, the sum of numbers in this column does not necessarily reflect the fuel cost of current electricity production.

⁵ Figure for conversion utilization represents material shipped.

⁶ ERDA's enrichment plants are presently operating at maximum utilization of available electric power, with the excess production being placed in the "preproduction stockpile" in anticipation of high demand for enriched uranium in the 1980's.

⁷ Figure represents current industry estimate for cost of spent fuel shipment, reprocessing, and waste disposition, exclusive of cost credits for recovered uranium and plutonium.

NA=Not available.

Source: DOE.

Part 7

Consumption

Energy Consumption

Domestic energy consumption in March 1978 was 6.8 quadrillion Btu, 6.6 percent more than in March 1977 and 8.8 percent more than in March 1976. The sectoral breakdown for March is not yet available.

In January 1978 the combined residential/commercial sector consumed 3.2 quadrillion Btu, 5.8 percent less than in January 1977. Industrial energy consumption for January 1978 was 2.6 quadrillion Btu, 3.4 percent more than in January 1977. Transportation consumption in January was 1.8 quadrillion Btu, down 1.8 percent from the January 1977 level.

Heating Degree-Days

The period March 27 through April 30, 1978, was warmer than normal but much colder than last year. National average, population-weighted, heating degree-days for the April period were 6 percent below normal but 32 percent above last April's average. Degree-days for New England were 3 percent below normal; for the Middle Atlantic States, 6 percent above normal; and for the Lower Atlantic States, 3 percent below normal. The Midwest accumulated 8 percent fewer than normal degree-days, and the South Central States, 27 percent fewer. Degree-days for the Mountain States were 22 percent less than normal, and for the West Coast, 16 percent less.

Degree-days for the 1977-78 heating season through April 30 have averaged 7 percent above normal but 1 percent below the previous season's accumulation.

Energy Consumption

Domestic Energy Consumption by Primary Energy Type

		Coal*	Natural Gas (dry)	Petroleum	Hydroelectric Power**	Nuclear Electric Power	Total	Cumulative Total
Quadrillion (10 ¹⁵) Btu								
1972	TOTAL	12.424	22.699	R32.966	2.946	0.576	R71.610	
1973	TOTAL	13.294	22.512	34.852	3.006	0.888	74.551	
1974	TOTAL	12.889	21.732	33.468	R3.313	1.215	R72.617	
1975	TOTAL	12.813	19.948	32.742	R3.222	1.839	R70.564	
1976	January	R1.216	R2.337	3.177	R0.282	0.172	R7.183	R7.183
	February	R1.076	R1.977	2.791	0.265	0.153	R6.262	R13.455
	March	R1.117	R1.755	2.948	R0.287	0.149	R6.256	R19.701
	April	R1.067	R1.538	2.749	0.261	0.117	R5.732	R25.433
	May	R1.073	R1.463	2.722	R0.276	0.127	R5.661	R31.094
	June	R1.112	R1.362	2.774	0.276	0.168	R5.692	R36.786
	July	R1.185	R1.399	2.829	0.281	0.189	R5.884	R42.671
	August	R1.194	R1.343	2.835	0.258	0.196	R5.827	R48.498
	September	R1.095	R1.328	2.776	0.222	0.184	R5.606	R54.104
	October	R1.133	R1.653	2.912	0.229	0.185	R6.113	R60.216
	November	R1.192	R1.912	3.107	0.216	0.172	R6.599	R66.816
	December	R1.289	R2.277	3.503	R0.221	0.225	R7.515	R74.331
	TOTAL	R13.751	R20.345	35.123	R3.075	2.037	R74.330	
1977	January	R1.287	R2.434	3.489	R0.224	0.236	R7.670	R7.670
	February	R1.140	R1.829	3.143	R0.167	0.209	R6.487	R14.158
	March	R1.145	R1.727	3.076	R0.215	0.220	R6.384	R20.541
	April	R1.055	R1.436	2.897	R0.203	0.212	R5.803	R26.344
	May	R1.119	R1.379	2.890	R0.203	R0.220	R5.810	R32.154
	June	R1.176	R1.337	2.976	R0.188	R0.229	R5.907	R38.061
	July	R1.275	R1.330	2.990	R0.184	0.233	R6.011	R44.072
	August	R1.246	R1.370	3.068	R0.183	R0.243	R6.108	R50.180
	September	R1.152	R1.431	2.924	R0.180	0.209	R5.897	R56.077
	October	R1.143	R1.520	R3.038	R0.188	R0.203	R6.092	R62.170
	November	R1.145	R1.696	3.017	R0.221	R0.207	R6.287	R68.457
	December	R1.222	R2.124	3.416	R0.246	0.253	R7.261	R75.718
	TOTAL	R14.105	R19.613	R36.924	R2.402	R2.674	R75.718	
1978	January	R1.237	R2.417	R3.340	R0.269	R0.263	R7.527	R7.527
	February	R1.043	R2.152	R3.196	R0.242	0.233	R6.866	R14.393
	March	1.014	1.928	3.356	0.269	0.241	6.808	21.201
	TOTAL (3 months)	3.294	6.497	9.892	0.780	0.737	21.201	

*Includes bituminous coal, lignite, and anthracite coal.

**Includes utility production, industrial production, and net imports.

R=Revised.

Source: EIA calculations based on data appearing elsewhere in this publication.

Domestic Energy Consumption by Economic Sector*

		Residential/ Commercial	Industrial	Transportation	Total
Quadrillion (10 ¹⁵) Btu					
1973	TOTAL	26.515	29.161	18.877	R74.551
1974	TOTAL	R25.863	R28.492	18.261	R72.617
1975	TOTAL	R26.135	R26.071	R18.358	R70.564
1976	January	R3.109	R2.421	1.653	R7.183
	February	R2.688	R2.111	1.463	R6.262
	March	R2.431	R2.199	1.626	R6.256
	April	R2.085	R2.068	1.580	R5.732
	May	R1.917	R2.191	1.553	R5.661
	June	R1.865	R2.228	1.599	R5.692
	July	R1.970	R2.278	1.637	R5.884
	August	R1.978	R2.258	1.592	R5.827
	September	R1.840	R2.208	1.558	R5.606
	October	R1.952	R2.561	1.600	R6.113
	November	R2.374	R2.585	1.642	R6.599
	December	R3.007	R2.714	1.794	R7.515
	TOTAL	R27.215	R27.823	19.294	R74.330
1977	January	3.425	R2.524	1.722	R7.670
	February	R2.967	R1.941	R1.579	R6.487
	March	R2.493	R2.239	R1.651	R6.384
	April	R2.093	R2.085	1.624	R5.803
	May	R1.918	R2.285	1.607	R5.810
	June	R1.972	R2.287	1.648	R5.907
	July	R2.115	R2.227	1.669	R6.011
	August	R2.108	R2.313	1.688	R6.109
	September	R1.955	R2.329	1.613	R5.897
	October	R2.003	R2.440	R1.649	R6.092
	November	R2.153	R2.496	1.639	R6.287
	December	R2.828	R2.625	1.808	R7.261
	TOTAL	R28.030	R27.790	19.898	R75.718
1978	January	3.226	2.609	1.691	7.527

*See Explanatory Note 11 for definitions of the Residential/Commercial, Industrial, and Transportation sectors. The methodology used for sector calculations is provided in the footnotes of the next table.

Energy Consumption by Economic Sector and Primary Source—January 1978 [Quadrillion (10¹⁵) Btu]

Sector ¹	Primary Energy Source					Primary Energy Consumption	Electricity Distributed ⁷	Net Energy Consumption	Electrical Energy Loss Distributed ⁸	Ultimate Energy Disposition
	Coal ²	Natural Gas (dry) ³	Petroleum ⁴	Hydroelectric ⁵	Nuclear ⁶					
Residential and Commercial	0.029	1.257	0.673	—	—	1.960	0.369	2.329	0.897	3.226
Industrial	0.283	0.846	0.654	0.001	—	1.785	0.240	2.025	0.584	2.609
Transportation	0	0.079	1.592	—	(⁹)	1.670	0.006	1.676	0.015	1.691
Electric Utilities	0.925	0.236	0.421	0.267	0.263	2.112	—	—	—	—
TOTAL	1.237	2.417	3.340	0.269	0.263	7.527	0.616	6.031	1.496	7.527

¹ See Explanatory Note 11 for definitions of the Residential and Commercial, Industrial, Transportation, and Electric Utilities Sectors.

² Data are from the Energy Information Administration. Includes anthracite and bituminous coal and lignite.

³ Aggregate data and data on utility consumption are from the Energy Information Administration. Data from the American Gas Association are used for the Residential and Commercial Sector, which includes 100 percent of the AGA "Other" category. Natural gas used in transportation, mostly for pipeline use, is estimated to be 3.6 percent of total natural gas consumption less electric utilities. This percentage is derived from 1974, 1975, and 1976 Bureau of Mines data on consumption. The Industrial Sector is then the difference between the total and the sum of the other sectors.

⁴ Aggregate petroleum data and data on oil consumed by electric utilities are from the Energy Infor-

mation Administration. Petroleum consumed in transportation was calculated based on Department of Transportation data as follows: Motor gasoline—100 percent; naphtha jet fuel—100 percent; kerosene jet fuel—97 percent; distillate fuel oil—30.3 percent; residual fuel oil—11.2 percent; all other products—4.7 percent. The remainder is distributed to economic sectors using the following percentage shares, derived from 1974, 1975, and 1976 Bureau of Mines data on consumption: Residential and Commercial—50.7 percent; Industrial—49.3 percent.

⁵ EIA hydroelectric power production plus net imports of electricity. These imports are assumed to be from hydroelectric power sources and are estimated at 0.011 quadrillion Btu per month in 1974, 0.005 quadrillion Btu per month for 1975, and 0.007 quadrillion Btu per month for 1976 and 1977. Monthly industrial hydroelectric power consumption is estimated to be one-twelfth of the preliminary Bureau of Mines annual figure for 1976.

⁶ EIA nuclear power production.

⁷ Electricity was distributed using EIA data on kilowatt-hour sales to ultimate customers. Electrical energy consumed by railroads and for street and highway lighting was distributed to the Transportation Sector. All "Other" sales, largely for use in government buildings, were distributed to the Residential and Commercial Sector.

⁸ In generating electricity with nuclear or fossil fuels, approximately 65 percent of the energy is lost in the form of heat. Transmission and distribution losses consume about an additional 3 percent of the energy inputs of the utility industry. In order to fully account for all energy consumed both directly and indirectly (i.e., ultimate energy disposition), the electricity losses are allocated to the final end-use sectors in proportion to their direct kilowatt-hour usage.

⁹ Negligible.

Energy Consumption (Continued)

Percent Changes in Energy Consumption for January 1978 by Sources and Economic Sectors

	January 1978 Consumption	Percent Change from January 1977*
	Quadrillion Btu	
Refined Petroleum Products	3.340	-4.3
Motor Gasoline	1.081	+2.8
Jet Fuel	0.168	-8.7
Distillate	0.799	-13.4
Residual	0.684	-6.2
Other Petroleum Products	0.609	-1.1
Natural Gas (Dry)	2.417	-0.7
Coal (Anthracite, bituminous, and lignite)	1.237	-3.9
Hydroelectric and Nuclear Electric Power	0.616	+5.8
TOTAL ENERGY USE	7.527	-1.9
Economic Sector Consumption		
Residential and Commercial	3.226	-5.8
Industrial	2.609	+3.4
Transportation	1.691	-1.8

*Computed on a daily average basis.

Energy Consumption (Continued)

Energy Consumption by the Residential and Commercial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ²	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu								
1973	TOTAL	0.295	7.577	7.077	3.445	8.120	26.515	
1974	TOTAL	0.297	7.427	6.484	3.424	R8.232	R25.863	
1975	TOTAL	R0.253	7.688	6.135	3.538	R8.520	R26.135	
1976	January	0.031	1.254	0.648	0.340	R0.836	R3.109	R3.109
	February	R0.019	1.090	0.581	0.315	R0.683	R2.688	R5.797
	March	0.018	0.856	0.571	0.286	R0.699	R2.431	R8.228
	April	R0.020	0.671	0.500	0.271	R0.623	R2.085	R10.313
	May	0.016	0.488	0.506	0.265	R0.642	R1.917	R12.230
	June	0.015	0.333	0.488	0.285	R0.745	R1.865	R14.095
	July	0.011	0.281	0.486	0.333	R0.858	R1.970	R16.065
	August	0.015	0.259	0.506	0.347	R0.851	R1.978	R18.043
	September	R0.016	0.272	0.518	0.331	R0.702	R1.840	R19.882
	October	0.020	0.395	0.569	0.286	R0.681	R1.952	R21.834
	November	0.025	0.723	0.622	0.288	R0.715	R2.374	R24.208
	December	R0.036	1.083	0.730	0.330	R0.828	R3.007	R27.215
	TOTAL	R0.243	7.706	6.726	3.676	R8.863	R27.215	
1977	January	R0.035	1.376	0.712	R0.367	R0.934	3.425	3.425
	February	R0.024	1.216	0.674	0.346	R0.707	R2.967	R6.391
	March	0.019	0.845	0.608	0.301	R0.720	R2.493	R8.884
	April	R0.020	0.623	0.538	0.277	R0.635	R2.093	R10.977
	May	R0.016	0.405	0.529	0.271	R0.697	R1.918	R12.896
	June	0.015	0.315	0.544	0.311	R0.787	R1.972	R14.868
	July	0.014	0.283	0.503	0.366	R0.950	R2.115	R16.983
	August	0.014	0.256	0.551	0.373	R0.915	R2.108	R19.091
	September	0.015	0.264	0.551	0.350	R0.775	R1.955	R21.046
	October	R0.018	0.376	R0.612	0.306	R0.691	R2.003	R23.048
	November	0.025	0.552	0.602	0.284	R0.691	R2.153	R25.201
	December	R0.030	0.952	R0.684	0.326	R0.837	R2.828	R28.030
	TOTAL	R0.246	7.462	R7.107	R3.876	R9.339	R28.030	
1978	January	0.029	1.257	0.673	0.369	0.897	3.226	3.226

(See footnotes on page 54)

Energy Consumption by the Industrial Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ³	Hydro-electric	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu									
1973	TOTAL	4.370	10.493	6.403	0.036	2.341	5.518	29.161	
1974	TOTAL	4.062	10.137	6.305	0.036	2.337	R5.615	R28.492	
1975	TOTAL	R3.798	8.425	5.966	0.035	2.302	R5.545	R26.071	
1976	January	R0.316	R0.794	0.630	0.003	0.196	R0.482	R2.421	R2.421
	February	R0.299	R0.618	0.565	0.003	0.198	R0.429	R2.111	R4.532
	March	R0.317	R0.616	0.556	0.003	0.206	R0.503	R2.199	R6.732
	April	R0.316	R0.587	0.487	0.003	0.205	R0.471	R2.068	R8.799
	May	R0.323	R0.658	0.492	0.003	0.209	R0.506	R2.191	R10.990
	June	R0.308	R0.670	0.475	0.003	0.214	R0.559	R2.228	R13.219
	July	R0.307	R0.734	0.473	0.003	0.213	R0.549	R2.278	R15.496
	August	R0.300	R0.709	0.492	0.003	0.218	R0.535	R2.258	R17.754
	September	R0.299	R0.716	0.504	0.003	0.220	R0.467	R2.208	R19.962
	October	R0.314	R0.951	0.554	0.003	0.218	R0.521	R2.561	R22.523
	November	R0.323	R0.905	0.605	0.003	0.215	R0.534	R2.585	R25.108
	December	R0.353	R0.900	0.710	0.003	0.214	R0.536	R2.714	R27.823
	TOTAL	R3.775	R8.859	6.540	0.033	2.525	R6.091	R27.823	
1977	January	R0.318	R0.767	0.693	R0.001	0.210	R0.535	R2.524	R2.524
	February	R0.305	R0.349	0.655	R0.001	0.207	R0.423	R1.941	R4.465
	March	R0.325	R0.591	0.591	R0.001	0.216	R0.516	R2.239	R6.704
	April	R0.306	R0.541	0.523	R0.001	0.217	R0.497	R2.085	R8.790
	May	R0.303	R0.667	0.514	R0.001	0.224	R0.576	R2.285	R11.075
	June	R0.294	R0.667	0.529	R0.001	0.225	R0.570	R2.287	R13.361
	July	R0.286	R0.657	0.489	R0.001	0.221	R0.573	R2.227	R15.589
	August	R0.274	R0.718	0.536	R0.001	0.227	R0.557	R2.313	R17.902
	September	R0.267	R0.795	0.536	R0.001	0.227	R0.503	R2.329	R20.231
	October	R0.298	R0.807	R0.595	R0.001	0.227	R0.512	R2.440	R22.670
	November	R0.296	R0.851	0.585	R0.001	0.222	R0.540	R2.496	R25.166
	December	R0.303	R0.878	R0.665	R0.001	0.218	R0.559	R2.625	R27.790
	TOTAL	R3.574	R8.288	R6.910	R0.017	2.640	R6.362	R27.790	
1978	January	0.283	0.846	0.654	0.001	0.240	0.584	2.609	2.609

(See footnotes on page 54)

Energy Consumption (Continued)

Energy Consumption by the Transportation Economic Sector¹

		Coal	Natural Gas (dry)	Petroleum ²	Electricity Distributed	Electrical Energy Loss Distributed	Total Energy Use	Cumulative Total Energy Use
Quadrillion (10 ¹⁵) Btu								
1973	TOTAL	0.009	0.733	17.940	0.058	0.137	18.877	
1974	TOTAL	0.009	0.656	17.392	0.060	0.144	18.261	
1975	TOTAL	0.001	0.602	17.544	0.062	0.149	R18.358	
1976	January	—	R0.076	1.556	0.006	0.015	1.653	1.653
	February	—	0.064	1.382	0.006	0.012	1.463	3.116
	March	—	0.055	1.552	0.005	0.013	1.626	4.741
	April	—	0.047	1.516	0.005	0.012	1.580	6.321
	May	—	0.043	1.493	0.005	0.012	1.553	7.874
	June	—	0.037	1.545	0.005	0.012	1.599	9.473
	July	—	0.038	1.581	0.005	0.013	1.637	11.110
	August	—	0.036	1.538	0.005	0.013	1.592	12.702
	September	—	0.037	1.504	0.005	0.011	1.558	14.259
	October	—	0.050	1.531	0.006	0.013	1.600	15.859
	November	—	0.061	1.561	0.006	0.014	1.642	R17.500
	December	—	0.074	1.699	0.006	0.015	1.794	19.294
	TOTAL	—	0.619	18.457	0.064	0.154	19.294	
1977	January	—	0.080	1.620	0.006	R0.015	1.722	1.722
	February	—	R0.058	1.503	0.006	0.012	R1.579	R3.301
	March	—	0.054	1.580	0.005	0.012	R1.651	R4.953
	April	—	R0.043	1.564	0.005	0.011	1.624	R6.577
	May	—	0.040	1.549	0.005	0.013	1.607	R8.184
	June	—	0.037	1.594	0.005	0.012	1.648	R9.832
	July	—	0.035	1.616	0.005	0.013	1.669	R11.501
	August	—	0.036	1.635	0.005	0.012	1.688	R13.189
	September	—	0.040	1.557	0.005	0.011	1.613	R14.802
	October	—	0.044	R1.587	0.005	0.012	R1.649	16.451
	November	—	0.052	1.567	0.006	0.014	1.639	R18.090
	December	—	0.068	1.719	0.006	0.015	1.808	19.898
	TOTAL	—	R0.588	R19.092	J.064	R0.153	19.898	
1978	January	—	0.079	1.592	0.006	0.015	1.691	1.691

¹ See Explanatory Note 11 for definitions of the Residential and Commercial, Industrial, and Transportation Sectors. The methodology used for sector calculations is provided in the footnotes of the previous table. Printed totals may differ slightly from the sum of their row/column components due to independent rounding.

² The percentage share used in calculating Residential and Commercial consumption of petroleum was 52.5 percent for 1973 and 50.7 percent for 1974, 1975, 1976, 1977, and 1978.

³ The percentage share used in calculating Industrial consumption of petroleum was 47.5 percent for 1973 and 49.3 percent for 1974, 1975, 1976, 1977, and 1978.

⁴ The percentage share used in calculating Transportation consumption of natural gas was 3.9 percent for 1973 and 3.6 percent for 1974, 1975, 1976, 1977, and 1978.

R=Revised data.

Heating Degree-Days*

Petroleum Administration For Defense (PAD) Districts	1978	March 27, 1978, through April 30, 1978				Cumulative July 1, 1977, through April 30, 1978				
		1977**		Normal (1941-70)**		1977-78	1976-77**		Normal (1941-70)**	
PAD District I	441.3	334.5	(31.9)	431.0	(2.4)	4,788.3	4,894.0	(-2.2)	4,408.8	(8.6)
New England Conn., Maine, Mass., N.H., R.I., Vt.	653.3	522.5	(25.0)	674.0	(-3.1)	6,054.2	6,164.2	(-1.8)	5,899.6	(2.6)
Middle Atlantic Del., Md., N.J., N.Y., Pa.	560.6	427.7	(31.1)	530.5	(5.7)	5,654.7	5,745.3	(-1.6)	5,207.0	(8.6)
Lower Atlantic Fla., Ga., N.C., S.C., Va., W. Va.	168.8	111.6	(51.2)	174.7	(-3.4)	2,929.0	3,055.6	(-4.1)	2,553.9	(14.7)
PAD District II Ill., Ind., Iowa, Kans., Ky., Mich., Minn., Mo., Nebr., N. Dak., Ohio, Okla., S. Dak., Tenn., Wisc.	524.6	363.6	(44.3)	571.3	(-8.2)	6,485.8	6,384.4	(1.6)	5,789.2	(12.0)
PAD District III Ala., Ark., La., Miss., N. Mex., Tex.	83.6	70.3	(18.9)	114.2	(-26.8)	2,683.0	2,813.9	(-4.7)	2,260.5	(18.7)
PAD District IV Colo., Idaho, Mont., Utah, Wyo.	506.9	542.9	(-6.6)	645.4	(-21.5)	5,553.2	5,782.0	(-4.0)	6,005.0	(-7.5)
PAD District V Ariz., Calif., Nev., Oreg., Wash.	267.7	247.5	(8.2)	317.6	(-15.7)	1,994.2	2,168.6	(-8.0)	2,645.6	(-24.6)
U.S. AVERAGE	403.2	305.9	(31.8)	428.6	(-5.9)	4,716.3	4,770.9	(-1.1)	4,395.7	(7.3)

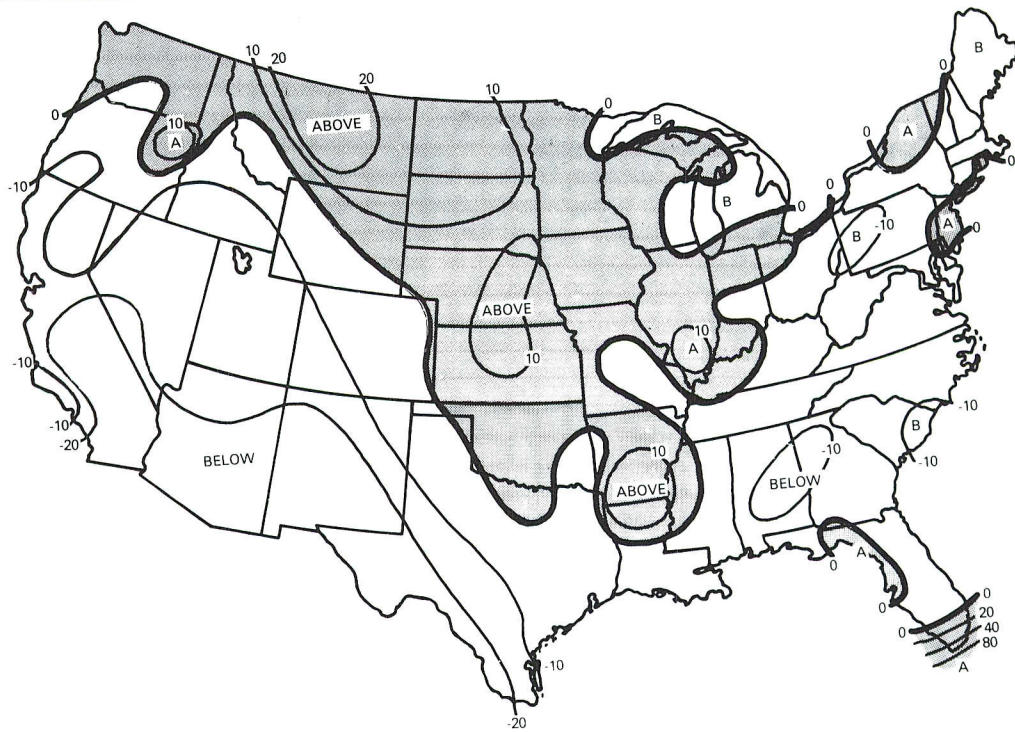
*See Explanatory Note 16 for explanation of degree-days.

**Percentage change in parentheses.

Heating Degree-Days (Continued)

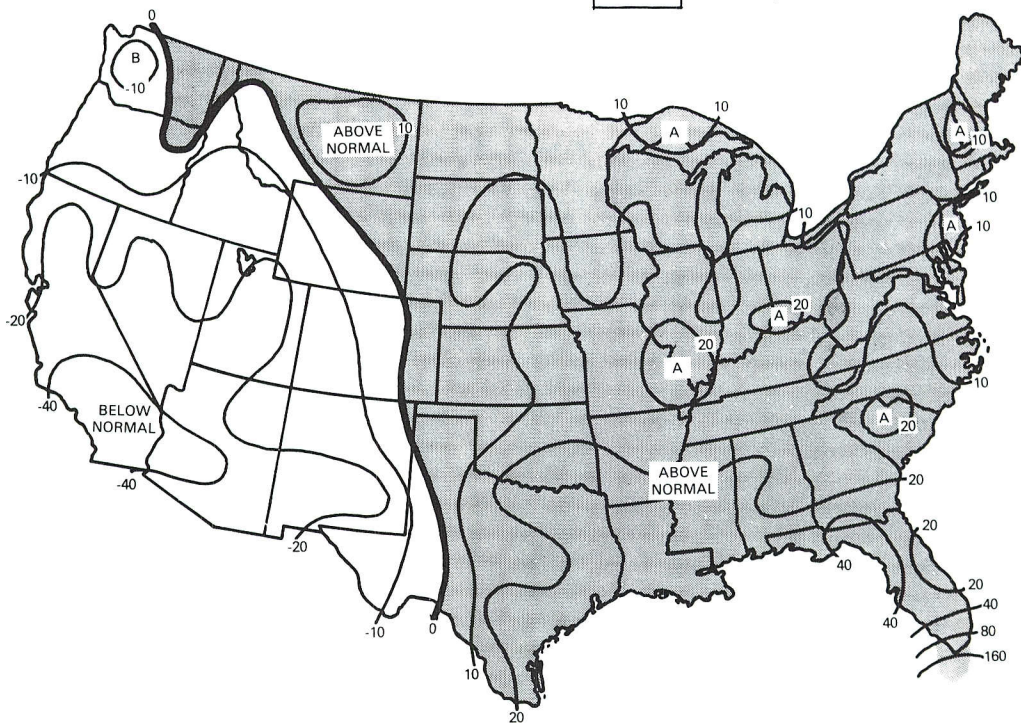
Heating Degree-Days Accumulated from July 1, 1977, through April 30, 1978

Percent Departure from 1976-1977



Percent Departure from Normal (1941-70)

A Above (normal)
B Below (normal)



Note: Above normal heating-days correspond to below normal temperatures.
Source: Department of Commerce—NOAA.

Part 8

Oil and Gas Exploration and Development

The rotary drilling rig count climbed to 2,198 during April 1978, the highest monthly average since July 1959, and an increase of 15.3 percent over the count for April 1977.

During the first quarter of 1978, a total of 10,942 wells were drilled, 6.0 percent more than in the first quarter of 1977. Gas well completions were up 19.7 percent but the number of oil wells drilled declined 7.9 percent. Dry holes increased by 14.7 percent.

Seismic petroleum exploration activity picked up in March after a 3-month seasonal slack period. A total of 334 crews (314 land, 20 marine) were at work during the month, 6 more than in the previous month, and 52 more than in March 1977.

Resource Development

Oil and Gas Exploration and Development

		Rotary Rigs in Operation	Exploratory and Development Wells Drilled*					Total Footage of Wells Drilled
		Monthly Average		Oil	Gas	Dry	Total	Thousands of feet
1972	AVERAGE	1,107	TOTAL	11,306	4,928	11,057	27,291	134,602
1973	AVERAGE	1,194	TOTAL	9,902	6,385	10,305	26,592	136,391
1974	AVERAGE	1,475	TOTAL	12,784	7,240	11,674	31,698	150,551
1975	January	1,615		1,299	655	1,040	2,994	13,189
	February	1,611		1,097	458	933	2,488	12,071
	March	1,651		1,341	658	1,091	3,090	15,472
	April	1,604		1,181	506	1,071	2,758	13,545
	May	1,592		1,100	451	891	2,442	12,054
	June	1,613		1,246	509	1,022	2,777	13,540
	July	1,616		1,229	557	920	2,706	12,545
	August	1,645		1,272	587	1,122	2,981	14,221
	September	1,699		1,504	831	1,165	3,500	15,636
	October	1,716		1,633	682	1,310	3,625	16,689
	November	1,757		1,619	776	1,270	3,665	15,788
	December	1,793		1,817	832	1,424	4,073	17,556
		AVERAGE	1,660	TOTAL **	16,408	7,580	13,247	37,235
1976	January	1,710		1,465	772	1,055	3,292	14,517
	February	1,594		1,341	652	1,159	3,152	14,888
	March	1,540		1,726	821	1,301	3,848	18,126
	April	1,480		1,237	672	994	2,903	13,765
	May	1,496		1,501	658	1,104	3,263	14,196
	June	1,546		1,500	709	1,123	3,332	14,780
	July	1,597		1,312	730	916	2,958	13,716
	August	1,691		1,265	711	1,140	3,116	14,697
	September	1,744		1,474	909	1,199	3,582	16,777
	October	1,794		1,396	750	1,123	3,269	14,542
	November	1,840		1,291	698	1,222	3,211	14,642
	December	1,860		1,512	926	1,414	3,852	17,093
		AVERAGE	1,656	TOTAL **	17,059	9,085	13,621	39,765
1977	January	1,850		1,391	732	1,096	3,219	14,517
	February	1,856		1,321	705	999	3,025	14,443
	March	1,887		1,817	958	1,297	4,072	19,400
	April	1,907		1,405	818	1,059	3,282	15,523
	May	1,982		1,382	877	1,150	3,409	16,702
	June	2,008		1,720	952	1,270	3,942	18,767
	July	2,023		1,304	724	1,022	3,050	14,529
	August	2,066		1,400	961	1,179	3,540	16,838
	September	2,084		1,924	1,105	1,288	4,317	19,333
	October	2,101		1,562	1,024	1,254	3,840	18,000
	November	2,113		1,785	1,091	1,447	4,323	19,537
	December	2,141		1,875	1,387	1,569	4,831	21,365
		AVERAGE	2,001	TOTAL **	18,912	11,378	14,692	44,982
1978	January	2,128		1,184	783	1,233	3,200	15,394
	February	2,135		1,486	851	1,239	3,576	16,933
	March	2,158		1,499	1,247	1,420	4,166	20,392
	April	2,198		NA	NA	NA	NA	NA
	AVERAGE (4 months)	2,153	TOTAL ** (3 months)	4,169	2,881	3,892	10,942	52,719

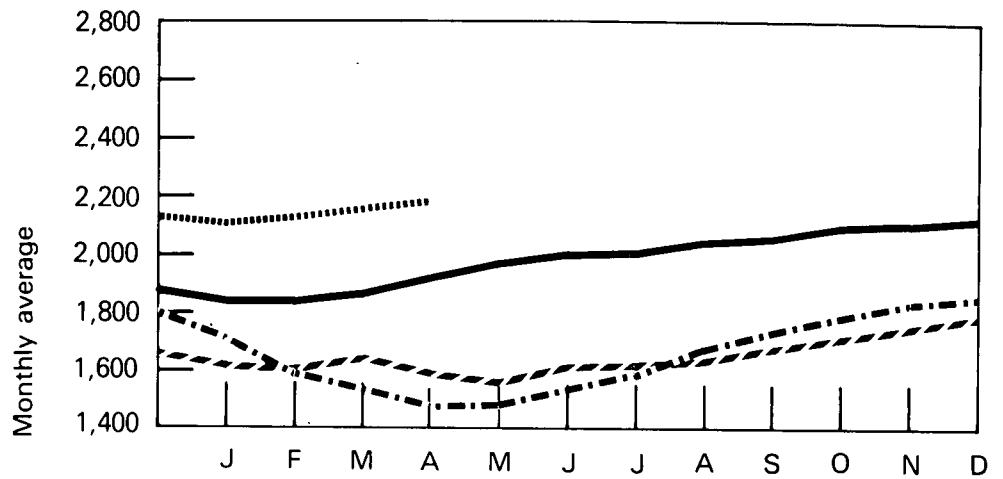
*Excludes service wells and stratigraphic and core tests.

**Totals reflect subsequent data revisions and therefore may not agree with cumulative monthly data.

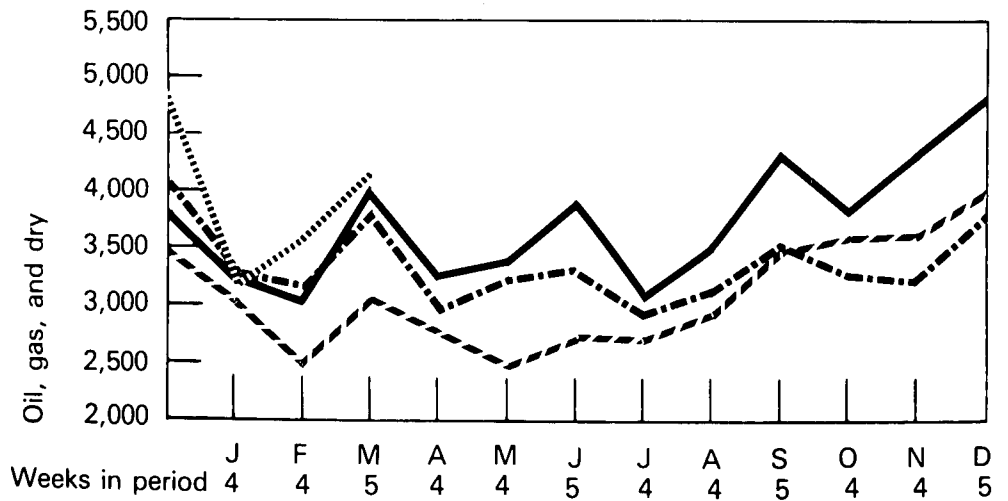
NA=Not available.

Sources: Rotary Rigs: Hughes Tool Company "Rotary Rigs Running - By State;" Wells: American Petroleum Institute "Monthly Drilling Report" and "Quarterly Review of Drilling Statistics for the United States."

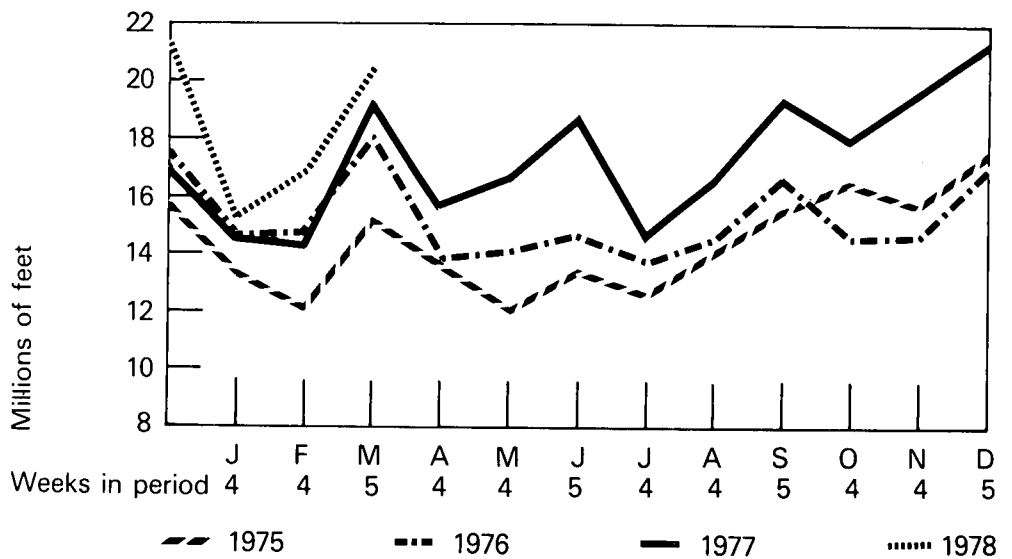
Rotary Rigs in Operation



Total Wells Drilled



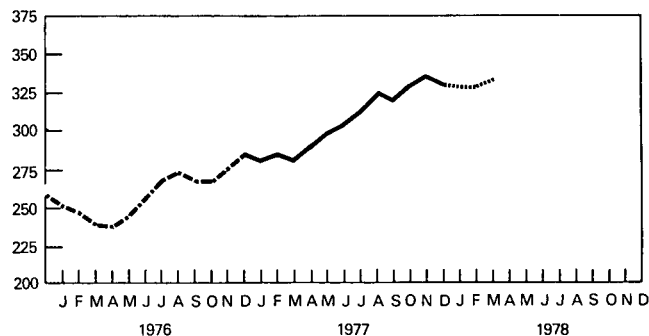
Total Footage of Wells Drilled



Oil and Gas Exploration and Development (Continued)

		Crews Engaged in Seismic Exploration			Line Miles of Seismic Exploration		
		Offshore	Onshore	Total	Offshore	Onshore	Total
		Monthly average			Monthly average		
1972	Year	12	239	251	10,306	9,333	19,639
1973	Year	23	227	250	21,579	10,597	32,175
1974	Year	31	274	305	28,482	13,219	41,701
1975	Year	30	254	284	25,773	12,558	38,331
1976	Year	25	237	262	18,859	11,910	30,769
1977	Year	27	281	308	NA	NA	NA
1975	January	27	274	301			
	February	24	278	302			
	March	23	276	299			
	April	23	260	283			
	May	32	254	286			
	June	38	251	289			
	July	37	249	286			
	August	40	249	289			
	September	40	234	274			
	October	29	241	270			
	November	27	238	265			
	December	26	233	259			
1976	January	20	232	252			
	February	17	232	249			
	March	18	222	240			
	April	17	221	238			
	May	21	226	247			
	June	29	229	258			
	July	30	240	270			
	August	33	242	275			
	September	28	240	268			
	October	21	246	267			
	November	25	250	275			
	December	27	259	286			
1977	January	26	254	280			
	February	27	259	286			
	March	22	260	282			
	April	26	266	292			
	May	29	272	301			
	June	31	274	305			
	July	30	285	315			
	August	31	295	326			
	September	29	291	320			
	October	28	302	330			
	November	26	309	335			
	December	26	303	329			
1978	January	26	302	328			
	February	23	305	328			
	March	20	314	334			
AVERAGE (3 months)		23	307	330			

Total Seismic Crews



NA=Not available.

Source: Society of Exploration Geophysicists "Monthly Seismic Crew Count" and annual reports published in *Geophysics*.

Price

Motor Gasoline

Beginning with January 1978, all gasoline price data presented in this publication are taken from the new Department of Energy retail motor gasoline survey. The survey consists of a sample of retail stations selected randomly from each State. Rural areas as well as urban areas are included. Each station is required to file a monthly report providing its average selling prices and sales volumes by grade and type of service, and its costs of gasoline purchases by grade. Regional averages are computed by first calculating a State average weighted by individual station sales volumes, and then weighting these State prices using the percentage of the region's total sales volumes represented by each State. Stations owned and operated directly by refiners are not included in this survey.

Preliminary data from the survey indicate that the national average selling price of leaded regular gasoline at full serve stations was 61.6 cents per gallon in February, a slight decrease of 0.1 cent from the January price. The average price that retail dealers paid for leaded regular gasoline declined by the same amount, to 52.6 cents per gallon.

At self serve retail outlets, leaded regular gasoline sold for an average of 57.1 cents per gallon in February, 0.1 cent below the price in January.

The average price for leaded premium gasoline at full serve retail outlets was unchanged in February from the January level of 67.7 cents per gallon. The price for unleaded regular gasoline declined by 0.1 cent to 65.7 cents per gallon.

Heating Oil

The average residential heating oil price increased 0.2 cent in February to 48.7 cents per gallon, which was 3.4 cents per gallon above the level a year earlier.

Residual Fuel Oil

The average retail price of No. 6 residual fuel oil decreased 26 cents in February to \$12.53

per barrel, an amount \$1.18 below the price in February 1977. Prices of residual fuel oil for all levels of sulfur content have declined from their February 1977 levels.

Aviation Fuels

The average retail price of kerosene type aviation fuel decreased 0.3 cent in February from its January level to 38.2 cents per gallon. The total price increase since February 1977 is 4.1 cents per gallon.

Liquefied Petroleum Gases

The average wholesale price of butane decreased 0.8 cent in February to 25.1 cents per gallon. This price is 0.8 cent higher than it was 1 year earlier. The average wholesale price of propane dropped 0.5 cent in February to 26.5 cents per gallon, which is 2.5 cents higher than a year ago.

Crude Oil

The average price paid by first purchasers for lower tier crude oil was \$5.29 per barrel in February, up 1 cent from the price paid in January. The upper tier price increased by 3 cents in February to \$11.81 per barrel. The average stripper oil price increased by 1 cent to \$13.90 per barrel. The Alaskan North Slope crude price increased 38 cents from January's low of \$5.30 per barrel. The average price paid for all first purchases of domestic crude oil in February was \$8.84 per barrel, up 16 cents from that for the previous month.

The average cost of imported crude oil purchased by refiners (including transportation costs to U.S. refineries) was \$14.39 per barrel in February, 11 cents less than the average price in February 1977.

The average price of domestic crude oil purchased by refiners (including transportation costs) in February was \$10.23 per barrel, 99 cents above the price 1 year earlier.

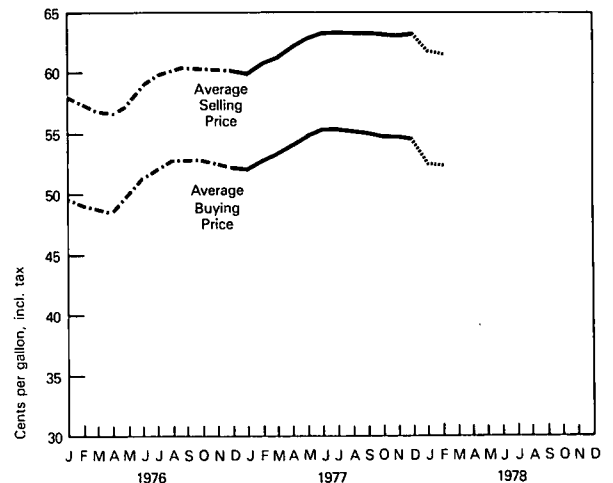
The composite refiner acquisition cost of domestic and imported crude oil (including transportation costs) was \$12.18 per barrel in February, up 5 cents from the revised January price, and up 38 cents from the February 1977 level.

Motor Gasoline

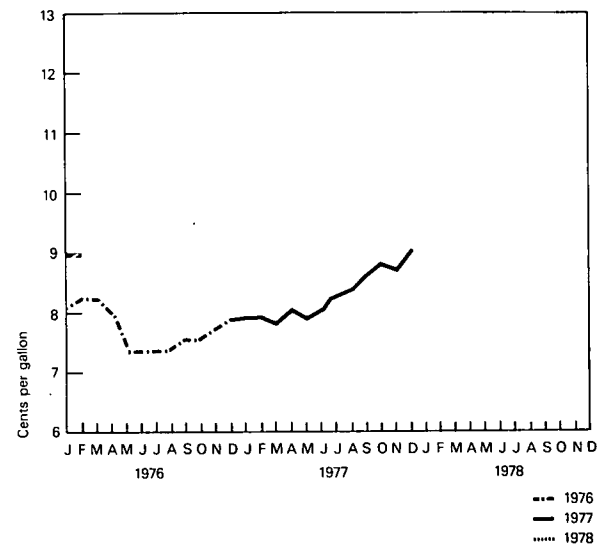
Leaded Regular Gasoline at Full Serve Retail Outlets

		Average Retail Dealer Selling Price	Average Retail Dealer Buying Price	Average Retail Dealer Margin
Cents per gallon, including tax*				
1974	AVERAGE	52.8	43.1	
1975	January	52.4	43.4	9.0
	February	52.5	43.5	9.0
	March	52.6	43.8	8.8
	April	53.5	44.9	8.6
	May	54.3	46.0	8.3
	June	55.6	47.5	8.1
	July	58.7	50.3	8.4
	August	59.2	50.8	8.4
	September	59.3	51.1	8.2
	October	58.9	50.7	8.2
	November	58.4	50.2	8.2
	December	58.0	49.9	8.1
	AVERAGE	56.2	47.8	
1976	January	57.7	49.6	8.1
	February	57.1	48.8	8.3
	March	56.6	48.3	8.3
	April	56.6	48.6	8.0
	May	57.4	50.0	7.4
	June	59.0	51.6	7.4
	July	59.6	52.2	7.4
	August	60.1	52.7	7.4
	September	60.2	52.6	7.6
	October	60.2	52.6	7.6
	November	60.0	52.2	7.8
	December	59.9	52.0	7.9
	AVERAGE	58.7	51.0	
1977	January	59.9	52.0	7.9
	February	60.7	52.8	7.9
	March	61.3	53.5	7.8
	April	62.2	54.1	8.1
	May	62.9	55.0	7.9
	June	63.4	55.3	8.1
	July	63.4	55.1	8.3
	August	63.4	55.0	8.4
	September	63.3	54.7	8.6
	October	63.2	54.4	8.8
	November	63.1	54.4	8.7
	December	63.3	54.3	9.0
1978	January	61.7	52.7	NA
	February	61.6	52.6	NA

Average Retail Prices for Full Serve Regular



Average Margins for Full Serve Regular



*To derive prices excluding taxes, 12.2 cents per gallon may be deducted for 1974 and 1975, and 12.5 cents per gallon may be deducted for 1976, 1977, and 1978.

NA= Not available.

Sources: FEA for 1974; Lundberg Survey, Inc., for 1975 through 1977; EIA-8, "Retail Motor Fuels Service Station Survey" for January 1978 forward.

Leaded Regular Gasoline at Self Serve Retail Outlets

		Average Retail Dealer Selling Price	Average Retail Dealer Margin
		Cents per gallon, including tax	
1975	November	55.4	5.5
	December	54.9	5.3
1976	January	54.7	5.4
	February	53.8	5.4
	March	53.2	5.3
	April	53.2	4.9
	May	54.4	4.5
	June	56.3	4.8
	July	56.6	4.6
	August	56.7	4.4
	September	56.5	4.3
	October	56.5	4.4
	November	56.4	4.5
	December	56.1	4.5
1977	January	56.2	4.5
	February	57.1	4.4
	March	57.7	4.4
	April	58.4	4.4
	May	58.9	4.2
	June	59.3	4.3
	July	59.2	4.4
	August	58.8	4.2
	September	58.5	4.2
	October	58.2	4.2
	November	58.1	4.0
	December	58.2	4.2
1978	January	57.2	NA
	February	57.1	NA

NA=Not available.

Source: Lundberg Survey, Inc. for 1975 through 1977; EIA-8 "Retail Motor Fuels Service Station Survey" for January 1978 forward.

Motor Gasoline (Continued)

Average Retail Dealer Selling Prices for Leaded Premium and Unleaded Regular Gasoline at Full Serve Retail Outlets

		Leaded Premium	Unleaded Regular
		Cents per gallon, including tax	
1975	January	57.1	NA
	February	57.3	56.1
	March	57.5	56.2
	April	58.2	57.1
	May	59.0	57.9
	June	60.3	58.8
	July	63.1	61.5
	August	63.6	62.0
	September	63.8	62.1
	October	63.4	62.1
	November	63.2	62.0
	December	62.9	61.4
1976	January	62.7	61.2
	February	62.1	60.6
	March	61.6	60.1
	April	61.6	60.4
	May	62.4	61.1
	June	63.9	62.9
	July	64.6	63.2
	August	65.2	63.9
	September	65.3	64.0
	October	65.2	64.0
	November	65.2	63.9
	December	65.0	63.9
1977	January	65.2	64.0
	February	66.1	65.0
	March	66.8	65.4
	April	67.6	66.1
	May	68.4	66.7
	June	68.9	67.2
	July	68.9	67.3
	August	68.9	67.0
	September	68.9	67.0
	October	68.9	67.0
	November	68.9	67.0
	December	69.1	67.2
1978	January	67.7	65.8
	February	67.7	65.7

NA=Not available.

Source: Lundberg Survey, Inc. for 1975 through 1977;
EIA-8, "Retail Motor Fuels Service Station Survey" for
January 1978 forward.

Average Retail Dealer Selling Prices for Major and Nonmajor Retail Dealers—January and February 1978

Leaded Regular Gasoline—Full Serve

Cents per gallon, including tax

	Selling Price	
	Jan	Feb*
Major	63.4	63.5
Nonmajor	58.9	58.8
National Average	61.7	61.6

Unleaded Regular Gasoline—Full Serve

Cents per gallon, including tax

	Selling Price	
	Jan	Feb*
Major	67.1	67.1
Nonmajor	62.4	62.5
National Average	65.8	65.7

Leaded Regular Gasoline—Self Serve

Selling Price
Jan Feb*

Major	58.6	58.2
Nonmajor	55.9	56.0
National Average	57.2	57.1

Unleaded Regular Gasoline—Self Serve

Selling Price
Jan Feb*

Major	63.0	63.1
Nonmajor	59.5	59.6
National Average	61.6	61.7

Leaded Premium Gasoline—Full Serve

Selling Price
Jan Feb*

Major	69.1	69.1
Nonmajor	64.0	64.4
National Average	67.7	67.7

Unleaded Premium Gasoline—Full Serve

Selling Price
Jan Feb*

Major	69.5	69.8
Nonmajor	70.4	69.9
National Average	69.6	69.8

Leaded Premium Gasoline—Self Serve

Selling Price
Jan Feb*

Major	66.1	65.9
Nonmajor	60.9	61.6
National Average	63.5	63.8

Unleaded Premium Gasoline—Self Serve

Selling Price
Jan Feb*

Major	66.3	66.8
Nonmajor	62.7	60.3
National Average	66.0	66.1

Average Regional Retail Dealer Selling Prices for Regular Gasoline at Full Serve Outlets—January and February 1978

DOE Region**

Selling Price

Cents per gallon,
including tax

Jan Feb*

1	61.3	61.2
2	60.7	61.0
3	61.4	61.3
4	61.4	61.0
5	61.6	61.2
6	60.7	60.5
7	61.4	61.0
8	64.4	63.9
9	65.0	66.2
10	63.8	63.9
National Average	61.7	61.6

*Preliminary data.

**DOE regions are defined in Explanatory Note 13.

Source: EIA-8 "Retail Motor Fuels Service Station Survey."

Diesel Fuel

Average Selling Prices and Margins for No. 2 Diesel Fuel*

		Selling Price		Margin	
		Truckstops	Service Stations	Truckstops	Service Stations
Cents per gallon, including tax					
1975	January	NA	50.6	NA	6.8
	February	49.7	50.2	7.0	7.3
	March	50.1	50.2	7.5	7.4
	April	50.5	50.6	7.4	7.5
	May	50.3	51.0	7.0	7.7
	June	51.4	51.4	7.5	7.9
	July	51.2	52.4	7.3	8.2
	August	52.1	52.6	8.1	8.9
	September	52.1	52.7	7.4	8.7
	October	51.8	53.0	6.2	7.7
	November	52.0	53.0	5.3	6.5
	December	51.7	52.4	5.3	6.7
1976	January	52.0	52.5	5.6	7.2
	February	52.1	52.0	6.0	7.3
	March	51.4	52.4	5.6	7.1
	April	51.1	52.8	5.8	7.8
	May	51.4	52.9	6.9	7.8
	June	52.0	53.3	7.0	7.7
	July	52.1	53.1	6.4	7.1
	August	52.3	53.2	6.0	7.0
	September	52.2	53.1	5.7	6.8
	October	52.4	53.1	5.8	6.5
	November	52.9	53.3	6.1	6.4
	December	53.1	53.5	5.7	5.9
1977	January	53.9	54.3	4.9	5.3
	February	55.3	55.6	5.5	5.9
	March	56.0	56.4	5.7	6.2
	April	56.6	56.7	6.5	6.7
	May	56.9	57.1	6.5	6.8
	June	57.3	57.4	7.1	7.2
	July	57.3	57.3	7.2	7.2
	August	57.0	57.2	6.7	7.2
	September	56.8	57.3	6.5	7.1
	October	56.9	57.2	6.4	6.9
	November	56.9	57.3	6.5	6.7
	December	57.4	57.5	6.6	6.9

*See Explanatory Note 14.

NA=Not available.

Source: Lundberg Survey, Inc.

Average Selling Prices and Margins for Major and Independent No. 2 Diesel Fuel Retail Dealers—December 1977

Cents per gallon, including tax

Truckstops

	Selling Price	Margin
Major	58.4	5.9
Independent	56.8	7.3
National Average	57.4	6.6

Service Stations

	Selling Price	Margin
Major	59.0	5.9
Independent	56.4	7.5
National Average	57.5	6.9

Source: Lundberg Survey, Inc.

No. 1 Diesel Fuel Prices

Wholesale Retail
Cents per gallon, excluding tax

1975	July	30.1	37.7
	August	30.8	38.2
	September	31.5	36.9
	October	33.1	35.4
	November	33.3	35.0
	December	34.2	35.5
1976	January	33.8	37.1
	February	33.6	35.3
	March	33.9	34.8
	April	34.2	35.4
	May	34.5	37.5
	June	34.7	37.9
	July	35.0	38.1
	August	36.0	38.2
	September	35.3	37.7
	October	36.3	36.4
	November	35.7	37.0
	December	35.5	36.7
1977	January	37.1	37.8
	February	38.4	39.2
	March	39.0	39.6
	April	39.7	40.6
	May	39.5	41.7
	June	40.2	41.2
	July	40.3	41.3
	August	40.9	41.3
	September	39.0	41.1
	October	40.1	39.8
	November	40.9	40.4
	December	39.5	R41.4
1978	January*	39.8	41.3
	February*	39.1	41.5

*Preliminary.

R=Revised data.

Note: Wholesale refers to the price of diesel fuel sold to other refiners and resellers, including branded jobbers, unbranded jobbers, and commercial accounts. Retail refers to the price at which company-owned and -operated retail dealers sell to consumers.

Source: FEA Form P302-M-1 "Petroleum Industry Monthly Report for Product Prices."

Heating Oil

Residential Heating Oil Prices

		Average Selling Price*	Average Purchase Price*	Average Distributor Margin*
		Cents per gallon		
1974	AVERAGE	34.7	26.9	
1975	January	37.4	29.1	8.3
	February	37.0	28.7	8.3
	March	36.6	28.4	8.2
	April	36.1	29.3	6.8
	May	36.7	30.0	6.7
	June	37.1	30.3	6.8
	July	37.2	30.6	6.6
	August	38.0	31.2	6.8
	September	38.4	31.0	7.4
	October	39.3	31.8	7.5
	November	39.4	32.1	7.3
	December	40.1	32.4	7.7
	AVERAGE	37.7	31.2	
1976	January	40.1	32.4	7.7
	February	40.1	32.4	7.7
	March	39.4	NA	NA
	April	39.0	NA	NA
	May	39.0	NA	NA
	June	39.3	NA	NA
	July	39.3	NA	NA
	August	39.8	NA	NA
	September	40.2	NA	NA
	October	40.7	NA	NA
	November	41.9	NA	NA
	December	43.0	NA	NA
1977	January	44.4	NA	NA
	February	45.3	NA	NA
	March	45.8	NA	NA
	April	45.9	NA	NA
	May	45.7	NA	NA
	June	45.7	NA	NA
	July	45.8	NA	NA
	August	46.0	NA	NA
	September	46.2	NA	NA
	October	46.7	NA	NA
	November	47.6	NA	NA
	December	47.9	NA	NA
1978	January	R48.5	NA	NA
	February**	48.7	NA	NA

*Average selling prices, purchase prices, and dealer margins represent sales for residential heating oil only.

**Preliminary data.

NA=Not available.

R=Revised data.

Sources: 1974 through February 1976—Form CLC-92 "No. 2 Heating Oil Monthly Price Adjustment Report;" June 1976 forward—FEA Form P112-M-1 "No. 2 Heating Oil Supply/Price Monitoring Report."

Residential Heating Oil Prices by Region

		New England	Mid- Atlantic	South Atlantic	East North Central	East South Central	West North Central	West South Central	Mountain	Pacific
		Cents per gallon								
1975	January	40.2	38.9	36.5	33.2	34.7	34.0	NA	37.5	38.0
	February	39.2	38.4	36.8	33.4	34.7	33.3	NA	36.6	37.7
	March	38.0	37.8	36.4	34.2	33.2	34.3	NA	NA	36.8
	April	37.4	36.8	36.8	33.2	33.7	34.5	NA	38.9	36.8
	May	37.6	36.9	36.4	35.1	34.7	35.4	NA	37.0	37.8
	June	37.7	37.7	36.4	35.8	NA	35.9	NA	37.6	37.6
	July	37.9	36.9	36.9	36.4	34.7	36.8	NA	NA	38.8
	August	38.8	38.2	37.9	36.3	35.7	36.3	NA	41.3	39.3
	September	39.4	38.7	37.6	36.5	35.7	36.8	NA	38.9	40.1
	October	40.3	39.9	38.3	37.4	36.6	37.9	NA	39.0	41.0
	November	41.0	39.6	38.7	37.9	NA	38.1	NA	40.2	41.3
	December	41.0	41.1	39.0	38.5	34.1	38.0	NA	44.8	40.9
1976	January	41.5	40.0	39.6	38.3	37.8	38.2	35.0	41.2	41.6
	February	41.4	40.3	39.4	38.0	37.7	38.3	34.4	41.0	42.1
	March	41.5	39.8	39.2	37.0	36.7	37.6	34.5	40.4	41.9
	April	41.2	40.0	38.9	37.1	35.9	37.3	34.6	40.3	40.8
	May	41.1	39.7	38.2	37.1	35.6	37.3	34.0	40.4	42.1
	June	40.9	41.1	39.1	37.7	37.2	37.3	34.3	40.3	42.8
	July	40.7	39.8	39.1	37.9	36.9	37.3	34.4	40.1	45.0
	August	41.5	40.3	39.5	38.2	37.2	37.7	34.3	39.7	44.7
	September	41.9	40.8	37.5	38.3	38.0	38.8	34.8	41.1	46.0
	October	42.3	41.4	40.4	39.0	38.5	38.7	35.1	42.1	46.0
	November	43.3	42.4	42.1	40.1	39.8	39.5	36.3	42.8	46.5
	December	44.4	43.6	42.9	41.5	41.0	41.9	36.3	42.7	43.8
1977	January	45.8	44.9	44.2	43.2	43.1	43.0	36.9	43.4	44.6
	February	46.6	45.8	45.7	43.9	43.4	44.0	38.8	44.2	45.2
	March	47.1	46.3	45.5	44.4	43.8	44.6	40.2	44.7	45.9
	April	47.2	46.5	45.5	44.8	43.3	44.2	40.8	44.8	46.4
	May	47.0	46.4	45.6	44.7	43.7	43.7	40.7	44.8	46.5
	June	47.1	46.4	45.7	44.7	44.0	43.3	41.2	45.8	46.8
	July	47.1	46.4	45.7	44.7	44.2	44.2	41.2	44.2	47.9
	August	47.4	46.6	45.6	44.7	43.7	44.5	41.0	44.9	48.2
	September	47.7	46.7	45.8	45.0	44.2	44.9	41.1	44.9	47.2
	October	48.0	47.3	46.4	45.3	43.9	45.4	41.1	45.4	47.4

NA=Not available.

Note: Data for West South Central Region are based on a sample of less than four reporting firms. Average regional distributor purchase prices for heating oil for the period January 1975 through February 1976 are published on page 70 of the October 1977 issue of the *Monthly Energy Review*. Sources: January through December 1975—Form CLC-92 "No. 2 Heating Oil Monthly Price Adjustment Report;" January 1976 forward—FEA Form P112-M-1 "No. 2 Heating Oil Supply/Price Monitoring Report."

		RESIDUAL FUEL OIL (Dollars per barrel)											
		No. 5		NO. 6						BUNKER "C"		TOTAL	
				0.0 to 0.3 percent sulfur		0.31 to 1.0 percent sulfur		Greater than 1.0 percent sulfur		Total			
		Whole- sale	Retail	Whole- sale	Retail	Whole- sale	Retail	Whole- sale	Retail	Whole- sale	Retail	Whole- sale	Retail
1975	July	10.19	11.28	11.57	12.86	10.90	12.05	10.25	10.59	10.66	11.70	7.88	10.54
	August	10.19	11.04	11.53	13.22	10.85	12.34	9.72	10.53	10.49	11.89	8.76	10.43
	September	10.58	11.07	11.75	12.94	10.63	11.65	9.87	10.52	10.48	11.52	8.93	10.29
	October	10.15	11.12	11.50	12.98	10.37	12.09	9.75	10.38	10.30	11.69	8.88	10.31
	November	10.90	11.27	12.21	12.96	10.33	12.03	9.90	10.34	10.47	11.68	9.01	10.43
	December	10.83	11.64	11.89	12.87	10.37	11.83	9.65	10.06	10.24	11.42	9.07	10.15
1976	January	11.08	11.63	12.13	12.39	10.62	11.61	9.57	10.23	10.53	11.35	8.75	10.35
	February	10.55	11.57	12.42	12.78	10.87	11.84	9.70	10.35	10.73	11.52	8.53	10.27
	March	10.41	11.89	12.36	12.81	11.05	11.80	9.56	10.21	10.74	11.43	8.59	10.35
	April	10.21	11.58	11.44	12.34	10.86	11.77	9.53	10.28	10.38	11.43	8.66	10.12
	May	9.87	11.49	11.71	11.87	10.80	11.40	9.47	9.89	10.11	10.95	8.75	10.65
	June	9.91	11.23	11.71	12.24	10.33	11.36	9.73	10.03	10.12	11.04	8.57	10.10
	July	10.06	11.70	11.73	12.12	10.22	11.36	9.83	10.04	10.25	11.04	9.23	10.34
	August	9.78	11.48	11.85	12.29	10.45	11.46	9.61	10.22	10.20	11.20	8.93	9.98
	September	10.36	11.37	11.85	12.50	10.33	11.55	10.04	10.28	10.35	11.30	9.22	10.05
	October	10.40	11.86	11.96	12.85	11.08	11.99	10.00	10.73	10.75	11.82	9.57	10.81
	November	11.04	12.04	12.41	13.15	11.57	12.21	10.40	10.99	11.16	11.95	10.31	10.88
	December	11.49	12.64	13.18	13.29	11.80	12.76	11.04	11.48	11.87	12.44	9.95	11.24
1977	January	12.00	13.20	14.06	14.34	12.79	13.68	11.51	12.32	12.45	13.32	10.34	11.89
	February	12.28	13.63	14.00	14.60	12.91	14.06	12.04	12.74	12.69	13.71	10.24	12.00
	March	12.15	13.76	14.00	14.58	13.47	14.51	11.62	12.70	12.68	13.84	9.97	11.74
	April	11.62	13.26	12.88	14.63	13.05	14.10	11.27	12.50	12.04	13.61	10.14	11.75
	May	11.54	12.69	13.56	14.48	11.90	13.73	11.05	12.15	11.64	13.42	9.97	11.41
	June	11.25	13.10	13.12	14.28	11.88	13.27	11.10	11.93	11.72	13.02	10.30	11.39
	July	11.24	12.67	13.31	14.38	11.73	13.12	11.02	12.06	11.62	13.01	10.91	11.44
	August	11.61	12.75	13.32	14.15	11.83	13.08	11.89	12.01	12.06	13.00	11.08	11.58
	September	11.70	12.84	13.35	14.33	11.79	13.11	11.78	12.19	12.03	12.94	11.20	11.72
	October	11.52	13.14	13.38	14.30	11.69	13.15	11.71	12.33	12.10	13.15	10.98	11.87
	November	11.29	13.16	12.85	14.24	11.66	12.93	11.44	12.15	11.76	12.96	10.42	11.66
	December	R11.64	13.53	12.87	13.95	R11.38	12.60	10.77	R11.95	11.28	12.70	11.27	R12.13
1978	January*	R11.47	R13.40	R12.71	14.19	R11.55	R12.73	R10.75	R12.01	11.33	12.79	R9.70	11.15
	February*	11.85	13.46	12.44	14.05	11.67	12.42	10.55	11.80	11.25	12.43	9.59	10.84

*Preliminary.

R=Revised data.

Note: Wholesale refers to the price of residual fuel sold to other refiners and resellers, including bulk plants, branded and unbranded jobbers, and other residual dealers. Retail refers to the price at which residual fuel oil is sold to ultimate consumers such as utility, industrial, institutional, commercial, and residential accounts.

Source: FEA Form P302-M-1 "Petroleum Industry Monthly Report for Product Prices."

Aviation Fuels

AVIATION FUELS (Cents per gallon)

		Aviation Gasoline		Naphtha-Type*	Kerosene-Type	
		Wholesale	Retail	Retail	Wholesale	Retail
1975	July	40.6	40.6	31.4	29.8	29.2
	August	41.3	42.1	30.8	32.1	29.5
	September	41.2	39.9	30.3	31.5	29.6
	October	41.1	41.2	30.2	31.7	30.0
	November	39.7	42.1	30.6	31.6	30.2
	December	40.9	40.9	30.7	31.9	30.5
1976	January	41.4	41.2	31.0	30.6	31.3
	February	41.2	42.0	31.1	31.1	31.2
	March	41.1	41.9	30.9	31.2	30.7
	April	41.2	42.5	30.5	31.9	30.5
	May	42.1	43.1	30.6	33.0	30.2
	June	42.6	42.3	31.5	32.1	30.3
	July	43.6	44.2	31.3	32.9	30.8
	August	43.7	44.1	31.7	32.1	31.1
	September	43.6	44.7	32.1	32.5	31.4
	October	43.6	43.8	32.1	32.5	31.9
	November	43.4	43.9	32.8	33.4	32.4
	December	43.5	43.7	32.9	34.7	32.2
1977	January	43.4	44.1	33.4	34.6	33.2
	February	44.7	45.0	34.0	37.1	34.1
	March	45.0	45.7	34.5	35.9	34.6
	April	46.0	47.2	34.3	35.9	34.9
	May	46.6	47.8	34.3	36.3	35.1
	June	46.7	47.6	35.1	36.8	35.7
	July	47.0	48.7	35.6	37.1	35.8
	August	47.9	50.1	35.5	36.6	36.0
	September	47.9	49.1	35.6	37.1	37.0
	October	48.1	49.0	35.7	37.3	37.3
	November	48.3	47.8	35.8	37.9	37.5
	December	47.8	48.1	36.2	37.2	37.8
1978	January**	47.8	49.1	36.9	R37.9	38.5
	February**	48.3	48.4	36.5	38.3	38.2

*Nearly all naphtha-type fuels are sold directly to the Defense Fuel Supply Center. Consequently, wholesale prices are not applicable.

**Preliminary data.

R=Revised data.

Note: Wholesale refers to the price of aviation fuel sold to refiners and resellers, including bulk plants, branded and unbranded jobbers, and aviation fuel distributors. Retail refers to the price of aviation fuel sold to ultimate consumers, including commercial airline and military accounts.

Source: FEA Form P302-M-1 "Petroleum Industry Monthly Report for Product Prices."

Propane and Butane

Wholesale Propane and Butane Prices*

		Propane	Butane
		Cents per gallon	
1975	July	17.9	17.5
	August	18.8	18.2
	September	19.8	19.7
	October	19.9	20.4
	November	20.2	20.5
	December	20.6	20.2
	AVERAGE (6 months)	19.7	19.4
1976	January	21.2	20.6
	February	21.0	21.6
	March	20.1	21.3
	April	19.4	20.9
	May	19.0	21.6
	June	19.5	21.4
	July	19.9	22.2
	August	20.2	22.3
	September	20.6	22.0
	October	20.9	22.7
	November	21.4	22.4
	December	22.1	23.6
	AVERAGE	20.6	21.9
1977	January	22.9	23.0
	February	24.0	24.3
	March	23.7	24.9
	April	23.6	24.2
	May	24.5	25.8
	June	24.5	25.6
	July	24.9	26.2
	August	25.5	26.1
	September	25.9	27.4
	October	26.8	26.3
	November	26.5	25.8
	December	26.7	25.8
1978	January**	27.0	25.9
	February**	26.5	25.1

*Wholesale refers to the price at which refiners, resellers, retailers, and gas plants sell to one another, including sales to agricultural and industrial accounts. Excludes butane/propane mixtures.

**Preliminary data.

Source: FEA Form P302-M-1.

Domestic Crude Petroleum Prices at the Wellhead¹

		Old	New	Domestic Average			Lower Tier ²	Upper Tier ²	Actual Stripper ³	Actual Domestic Average ⁴	Imputed Domestic Average ⁴		
Dollars per barrel					Dollars per barrel								
1974	AVERAGE	5.03	10.13	6.87	1976	September	5.17	11.65	13.21	8.39	8.19		
1975	January	5.05	11.28	7.61		October	5.15	11.62	13.35	8.46	8.23		
	February	5.03	11.39	7.47		November	5.17	11.62	13.31	8.62	8.40		
	March	5.03	11.47	7.57		December	5.17	11.64	13.30	8.62	8.40		
	April	5.03	11.64	7.55		AVERAGE	5.13	11.71	12.16	8.19			
	May	5.03	11.69	7.52	1977	January	5.17	11.44	13.27	8.50	8.28		
	June	5.03	11.73	7.49		February	5.18	11.39	13.32	8.57	8.33		
	July	5.03	12.30	7.75		March	5.15	11.03	13.31	8.45	8.19		
	August	5.03	12.38	7.73		April	5.15	10.97	13.28	8.40	8.14		
	September	5.04	12.46	7.75		May	5.18	10.98	13.26	8.49	8.23		
	October	5.03	12.73	7.83		June	5.16	10.92	13.28	8.44	8.17		
	November	5.03	12.89	7.80									
	December	5.03	12.95	7.93									
	AVERAGE	5.03	12.03	7.67			Lower Tier ²	Upper Tier ²	Actual Stripper ³	Alaskan North Slope ⁵	Naval Petroleum Reserves ⁶	Actual Domestic Average ⁴	Imputed Domestic Average ⁴
1976	January	5.02	12.99	8.63									
		Lower Tier ²	Upper Tier ²	Domestic Average		July	5.16	11.00	13.31	6.84	12.21	8.48	8.21
						August	5.18	10.93	13.95	6.91	12.29	8.62	8.25
						September	5.20	11.20	14.01	6.98	12.33	8.63	8.26
						October	5.23	11.42	14.01	6.66	12.38	8.72	8.36
						November	5.24	11.63	13.98	5.73	12.40	8.72	8.35
						December	5.25	11.76	13.98	5.73	12.36	8.77	8.40
						AVERAGE	5.19	11.22	13.59	6.35	12.34	8.57	
1976	February	5.05	11.47	7.87		January	5.28	11.78	13.89	5.30	12.38	8.68	8.34
	March	5.07	11.39	7.79		February ⁷	5.29	11.81	13.90	5.68	12.46	8.84	8.48
	April	5.07	11.52	7.86									
	May	5.13	11.55	7.89									
	June	5.15	11.60	7.99									
	July	5.19	11.59	8.04									
	August	5.18	11.62	8.03									

¹ See Explanatory Note 15.² See Definitions.³ Stripper oil was exempt from price controls beginning September 1, 1976. From February through August 1976 stripper oil was subject to upper tier price ceilings.⁴ The actual domestic average price represents the average price at which all domestic crude oil is purchased. The imputed domestic average price is the average price used to establish ceiling prices for domestic crude oil in accordance with the provisions of the Energy Conservation and Production Act. It is calculated as the weighted average of lower tier, upper tier, and an imputed stripper crude oil price. The imputed stripper crude oil price is equal to \$11.63 per barrel plus the difference between the composite price of crude oil in August 1976 (excluding stripper oil) and the composite price of crude oil in the month of measurement (excluding stripper oil).⁵ Alaskan North Slope (ANS) crude oil prices are treated as Upper Tier for determining the applicable wellhead ceiling prices. ANS is included in both the Actual Domestic Average and the Imputed Domestic Average price determinations.⁶ The Naval Petroleum Reserves (NPR) are exempt from pricing regulations but have been reported here as Upper Tier prior to July 1977. NPR is included in the Actual Domestic Average price determinations, but not in the Imputed Domestic Average.⁷ Preliminary data based on early reports.

R= Revised data.

Sources: 1974 through January 1976—Form FEA-90 "Crude Petroleum Production Monthly Report;" February 1976 forward—FEA Form P124-M-O "Domestic Crude Oil Purchasers Report."

Crude Oil (Continued)

Percentages of Domestic Production Sold at the Wellhead

		Old Oil	New Oil	Released	Stripper		
1975	January*	58	19	10	12		
	February*	61	17	9	12		
	March	60	18	10	12		
	April	61	17	9	12		
	May	62	17	8	13		
	June	63	16	8	13		
	July	62	16	8	14		
	August	63	16	7	14		
	September*	63	15	7	14		
	October	63	16	7	14		
	November	64	15	7	14		
	December	63	16	7	14		
	AVERAGE	62	16	8	13		
1976	January	54	21	10	15		
		Lower Tier	Upper Tier				
	February	56	30	—	14		
	March	57	29	—	14		
	April	57	29	—	14		
	May	57	29	—	14		
	June	56	29	—	15		
	July	56	30	—	14		
	August	56	30	—	14		
		Lower Tier	Upper Tier		Stripper		
	September	53.4	33.7		12.9		
	October	52.4	34.7		12.9		
	November	49.9	36.6		13.4		
	December	50.1	36.4		13.6		
	AVERAGE	54.4	31.5		14.1		
	January	50.6	36.7		12.7		
	February	49.5	37.2		13.3		
	March	49.2	37.2		13.6		
	April	49.5	36.9		13.6		
	May	48.4	37.6		14.0		
	June	48.8	37.0		14.2		
1977		Lower Tier	Upper Tier	Stripper	Alaskan North Slope**	Naval Petroleum Reserve**	
	July	46.75	36.59	13.30	2.58	0.75	
	August	43.31	36.65	13.32	5.79	0.91	
	September	42.78	34.07	13.14	9.06	0.91	
	October	42.23	34.58	12.92	9.09	1.15	
	November	41.41	34.67	13.00	9.84	1.05	
	December	40.42	34.61	13.00	10.92	1.03	
	AVERAGE	45.92	36.11	13.32	4.14	0.51	
	January	R41.73	R34.19	R12.69	R10.17	1.19	
	February***	40.74	34.37	13.69	9.95	1.23	
1978	January	R41.73	R34.19	R12.69	R10.17	1.19	
	February***	40.74	34.37	13.69	9.95	1.23	

*Totals do not add to 100 due to rounding.

**See footnotes 5 and 6 of previous table.

***Preliminary.

R=Revised data.

Sources: January 1975 through January 1976—Form FEA-90 "Crude Petroleum Production Monthly Report;" February 1976 through August 1976—FEA Form P124-M-0 "Domestic Crude Oil Purchasers Report" for Lower Tier percentages and EIA estimates for Upper Tier percentages; September 1976 forward—FEA Form P124-M-0 "Domestic Crude Oil Purchasers Report."

		Entitlement Price* (Dollars)	National Old Oil Supply Ratio*	Crude Oil Entitlement Benefit* (Dollars)
1974	November	5.00	.411	2.06
	December	5.00	.400	2.00
1975	January	6.00	.352	2.11
	February	6.75	.373	2.52
	March	7.31	.359	2.62
	April	7.29	.390	2.84
	May	7.39	.383	2.83
	June	7.82	.360	2.82
	July	8.13	.354	2.88
	August	8.31	.352	2.93
	September	8.31	.355	2.95
	October	8.62	.356	3.07
	November	8.94	.343	3.07
	December	8.55	.363	3.10
1976	January	8.09	.309	2.50
National Domestic Crude Oil Supply Ratio				
1976	February	7.85	.352	2.76
	March	7.89	.358	2.82
	April	7.85	.356	2.79
	May	7.82	.356	2.78
	June	7.91	.328	2.59
	July	7.80	.314	2.45
	August	8.02	.319	2.56
	September	7.80	.296	2.31
	October	7.84	.293	2.30
	November	7.90	.273	2.16
	December	7.97	.263	2.10
1977	January	8.30	.266	2.21
	February	8.53	.267	2.28
	March	8.71	.273	2.38
	April	8.69	.285	2.48
	May	8.77	.280	2.46
	June	8.65	.273	2.36
	July	8.68	.258	2.24
	August	8.75	.266	2.33
	September	8.75	.250	2.19
	October	8.78	.250	2.20
	November	8.61	.239	2.06
	December	8.65	.233	2.02
1978	January	8.61	.240	2.07
	February	8.48	.230	1.95

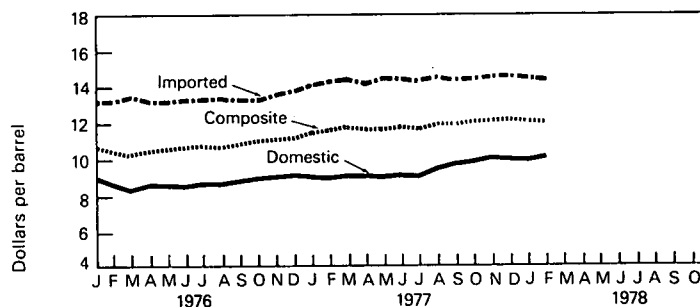
*See Definitions.
Source: DOE.

Crude Oil (Continued)

Refiner Acquisition Cost of Crude Petroleum*

		Domestic	Imported	Composite
		Dollars per barrel		
1974	AVERAGE	7.18	12.52	9.07
1975	January	7.78	12.77	9.48
	February	8.29	13.05	10.09
	March	8.38	13.28	9.91
	April	8.23	13.26	9.83
	May	8.33	13.27	9.79
	June	8.33	14.15	10.33
	July	8.37	14.03	10.57
	August	8.48	14.25	10.81
	September	8.49	14.04	10.79
	October	8.68	14.66	10.85
	November	8.67	15.04	11.05
	December	8.66	14.81	10.98
	AVERAGE	8.39	13.93	10.38
1976	January	9.14	13.27	10.76
	February	8.67	13.26	10.54
	March	8.48	13.51	10.44
	April	8.66	13.39	10.63
	May	8.62	13.41	10.66
	June	8.60	13.48	10.88
	July	8.72	13.51	10.97
	August	8.65	13.58	10.78
	September	8.95	13.47	11.08
	October	9.13	13.49	11.20
	November	9.23	13.58	11.26
	December	9.25	13.71	11.32
	AVERAGE	8.84	13.48	10.89
1977	January	9.23	14.11	11.64
	February	9.24	14.50	11.80
	March	9.32	14.54	11.88
	April	9.21	14.36	11.75
	May	9.21	14.62	11.87
	June	9.34	14.63	11.98
	July	9.32	14.44	11.90
	August	9.54	14.68	12.01
	September	9.75	14.50	12.01
	October	9.95	14.56	12.12
	November	10.17	14.61	12.18
	December	10.15	14.76	12.27
1978	AVERAGE	9.55	14.53	11.96
	January	10.14	14.52	12.13
	February**	10.23	14.39	12.18

Crude Oil Refiner Acquisition Cost



*See Explanatory Note 16.

**Preliminary data.

R=Revised data.

Sources: 1974 through January 1976—Form FEO-96 "Monthly Cost Allocation Report;" February 1976 forward—FEA Form P110-M-1 "Refiners' Monthly Cost Allocation Report."

Estimated Landed Cost of Imported Crude Petroleum From Selected Countries*

		Algeria	Canada	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	U.A. Emirates	Venezuela
		Dollars per barrel								
1975	January	12.72	12.43	13.30	12.11	12.56	12.07	12.07	13.14	11.37
	February	12.11	12.15	13.52	11.86	11.80	12.18	11.94	12.67	11.56
	March	12.46	12.79	13.94	12.08	12.47	12.56	11.78	13.40	11.66
	April	12.36	12.95	13.71	12.34	11.98	12.46	12.16	12.55	11.61
	May	12.41	12.08	13.71	11.93	11.85	12.34	12.27	13.29	11.54
	June	12.37	11.90	13.73	12.51	12.25	12.49	11.93	12.48	11.51
	July	12.69	12.15	13.98	11.83	11.96	12.37	12.08	12.78	11.46
	August	12.68	12.27	13.85	12.17	12.01	12.32	12.10	12.60	11.44
	September	12.52	12.63	13.75	11.97	12.08	12.42	12.17	12.49	11.42
	October	13.45	13.02	14.00	12.27	12.64	13.18	12.64	12.85	12.08
	November	13.28	14.00	13.81	12.47	13.17	13.37	12.58	13.23	12.38
	December	13.46	13.96	13.92	13.01	13.27	13.57	12.93	13.21	12.31
	AVERAGE	12.72	12.72	13.79	12.21	12.35	12.62	12.30	12.87	11.65
1976	January	13.56	12.95	13.89	13.01	13.52	13.61	13.18	13.50	11.60
	February	13.57	13.24	13.94	12.87	13.45	13.52	13.21	13.36	12.09
	March	13.83	13.30	13.94	12.77	13.36	13.62	13.18	13.37	11.71
	April	13.73	13.61	13.78	12.91	13.38	13.60	13.11	13.18	11.95
	May	13.47	13.62	13.84	12.82	13.59	13.62	13.05	13.39	11.61
	June	13.75	14.19	13.84	13.00	13.38	13.78	13.14	13.09	11.55
	July	13.77	13.79	13.80	12.76	13.53	13.81	13.02	13.45	11.44
	August	13.91	13.78	13.78	13.09	13.51	13.87	13.03	13.23	11.77
	September	14.03	13.70	13.80	12.78	13.72	13.82	12.87	13.44	11.98
	October	13.81	13.71	13.84	12.73	13.83	13.99	12.87	13.22	11.84
	November	13.84	13.59	13.77	12.58	13.73	13.95	13.01	13.18	12.01
	December	14.14	13.52	13.75	12.69	13.79	14.11	13.02	13.29	12.19
	AVERAGE	13.81	13.57	13.82	12.82	13.58	13.80	13.04	13.30	11.80
1977	January	14.80	13.92	14.42	13.16	14.64	14.97	13.22	13.56	13.29
	February	15.18	13.74	14.57	13.56	15.12	15.12	13.32	13.46	13.76
	March	15.08	14.34	14.64	13.94	14.88	15.13	13.50	13.80	13.41
	April	15.21	14.02	14.70	13.95	15.12	15.37	13.41	13.78	13.19
	May	15.20	14.94	14.59	13.94	14.91	15.40	13.49	13.85	13.10
	June	15.34	14.49	14.63	13.81	14.92	15.37	13.39	13.72	13.06
	July	15.29	13.91	14.75	13.84	14.88	15.39	13.64	14.20	13.02
	August	15.24	14.24	14.65	13.99	14.70	15.25	13.72	14.36	12.82
	September	15.29	14.14	14.62	13.77	14.99	15.34	14.01	14.41	13.08
	October	15.41	14.00	14.67	13.83	14.81	15.31	13.85	14.56	13.16
	November	15.05	14.52	14.73	13.88	14.73	15.23	13.94	14.19	13.11
	December	15.25	14.27	14.58	13.95	14.81	15.21	13.49	14.48	12.99
1978	January	15.01	14.37	14.60	13.91	14.63	14.88	13.93	14.40	13.00
	February	14.91	14.31	14.53	13.75	14.85	14.90	13.96	14.07	12.93

*See Explanatory Note 17.

Source: FEA Form F701-M-O "Transfer Pricing Report."

Crude Oil (Continued)

Estimated FOB Cost of Imported Crude Petroleum from Selected Countries*

		Algeria	Canada	Indonesia	Iran	Libya	Nigeria	Saudi Arabia	U.A. Emirates	Venezuela
		Dollars per barrel								
1975	January	12.09	10.10	11.98	10.78	11.93	11.51	10.63	11.26	10.91
	February	11.83	9.05	12.20	10.62	11.60	11.57	10.55	11.43	11.15
	March	12.02	11.28	12.55	10.81	11.94	11.77	10.78	11.13	11.11
	April	11.82	10.49	12.60	10.85	11.36	11.77	10.78	11.05	11.06
	May	11.69	10.79	12.64	10.62	11.10	11.63	10.93	10.90	10.91
	June	11.52	10.05	12.59	10.90	11.02	11.64	10.66	10.74	10.89
	July	11.80	9.93	12.44	10.67	11.08	11.49	10.70	11.04	10.87
	August	11.72	10.20	12.56	10.80	11.17	11.60	10.64	10.87	10.78
	September	11.78	10.33	12.48	10.59	11.23	11.59	10.96	11.04	10.82
	October	12.63	10.86	12.73	10.97	11.81	12.45	11.17	11.14	11.49
	November	12.59	11.17	12.72	11.54	12.34	12.69	11.50	11.67	11.59
	December	12.74	NA	12.76	11.61	12.32	12.81	11.48	61.88	11.67
1976	January	12.96	NA	12.77	11.61	12.34	12.85	11.67	11.91	11.15
	February	12.89	NA	12.77	11.48	12.34	12.85	11.64	11.93	11.61
	March	12.93	NA	12.78	11.45	12.34	12.94	11.71	11.91	11.26
	April	12.98	NA	12.74	11.58	12.39	12.95	11.72	11.94	11.38
	May	13.01	NA	12.76	11.58	12.45	12.97	11.61	11.85	11.10
	June	13.02	NA	12.74	11.62	12.40	12.97	11.64	11.92	11.03
	July	13.06	NA	12.79	11.64	12.64	13.11	11.58	11.89	10.87
	August	13.06	NA	12.75	11.61	12.52	13.08	11.58	11.92	11.19
	September	13.12	NA	12.73	11.66	12.66	13.06	11.55	11.97	11.53
	October	13.09	NA	12.79	11.63	12.70	13.25	11.65	11.92	11.41
	November	13.12	NA	12.71	11.62	12.74	13.25	11.62	11.96	11.58
	December	13.21	NA	12.82	11.78	12.83	13.36	11.65	12.16	11.77
1977	January	14.03	NA	13.41	12.03	13.64	14.11	11.92	12.53	12.91
	February	14.31	NA	13.43	12.36	13.89	14.24	12.04	12.33	13.30
	March	14.29	NA	13.58	12.79	13.87	14.32	12.24	12.51	12.98
	April	14.34	NA	13.55	12.79	13.98	14.51	12.23	12.53	12.62
	May	14.31	NA	13.57	12.78	13.93	14.56	12.23	12.56	12.60
	June	14.35	NA	13.55	12.68	13.94	14.55	12.21	12.44	12.53
	July	14.43	NA	13.61	12.78	13.99	14.52	12.40	12.70	12.48
	August	14.48	NA	13.63	12.80	13.95	14.54	12.56	13.15	12.37
	September	14.43	NA	13.64	12.73	13.99	14.56	12.72	13.20	12.55
	October	14.43	NA	13.65	12.79	13.93	14.48	12.70	13.22	12.72
	November	14.37	NA	13.65	12.75	13.88	14.53	12.73	13.33	12.71
	December	14.44	NA	13.61	12.71	13.85	14.45	12.77	13.27	12.56
1978	January	14.29	NA	13.67	12.62	13.77	14.18	12.70	13.23	12.73
	February	14.21	NA	13.62	12.68	13.91	14.18	12.78	13.18	12.61

NA=Not available.

*The FOB cost excludes all costs related to insurance and transportation. See Explanatory Note 18.

Source: FEA Form F701-M-0 "Transfer Pricing Report."

Unrecouped Costs for Refined Products for 30 Largest Refiners

		Distillate*	Motor Gasoline	Aviation Jet Fuel**	Other Products	Total
		Millions of dollars				
1975	January	254	431	—	672	1,357
	February	300	418	—	790	1,508
	March	282	452	—	966	1,700
	April	302	485	—	807	1,594
	May	292	370	—	771	1,433
	June	284	266	—	785	1,334
	July	233	219	—	624	1,075
	August	280	344	—	583	1,208
	September	347	335	—	661	1,342
	October	338	245	—	673	1,255
	November	426	275	—	796	1,497
	December	446	211	—	826	1,483
1976	January	336	242	131	515	1,224
	February	279	336	145	456	1,216
	March	263	316	163	456	1,198
	April	237	398	180	524	1,339
	May	264	632	161	446	1,503
	June	—	628	135	349	1,112
	July	—	587	129	384	1,100
	August	—	679	125	352	1,156
	September	—	619	134	340	1,093
	October	—	733	151	372	1,256
	November	—	796	168	368	1,332
	December	—	723	139	317	1,179
1977	January	—	901	166	325	1,392
	February	—	1,038	187	303	1,528
	March	—	956	180	287	1,423
	April	—	1,029	194	343	1,566
	May	—	968	199	328	1,495
	June	—	956	232	347	1,535
	July	—	869	210	387	1,466
	August	—	735	208	454	1,397
	September	—	746	182	494	1,422
	October	—	833	243	504	1,580
	November	—	857	213	534	1,604
	December	—	767	188	463	1,418
1978	January		R971	R188	R413	R1,572
	February***		1,206	200	431	1,837

*Includes No. 2 heating oil and No. 2 diesel fuel only. After May 1976, reporting of the distillate bank is no longer required due to decontrol of middle distillates.

**Prior to January 1976 refiners were not required to maintain separate banks for aviation jet fuel.

***Preliminary.

R=Revised data.

Source: FEA Form P110-M-1 "Refiners' Monthly Cost Allocation Report."

Natural Gas

Natural Gas Prices Reported by Major Interstate Pipeline Companies

		PURCHASES			SALES		
		From Domestic Producers	From Canadian and Mexican Sources	Total Purchases	To Industrial Users*	To Resellers**	Total Sales
Cents per thousand cubic feet							
1975	January	30.4	104.0	35.8	67.8	70.9	71.2
	February	29.5	105.9	35.2	70.1	74.0	74.3
	March	33.5	102.5	38.8	70.4	77.7	77.8
	April	32.8	102.8	38.3	71.1	82.3	81.9
	May	34.7	100.6	39.8	71.1	83.7	82.8
	June	35.3	98.9	40.2	72.2	85.1	83.9
	July	36.7	101.1	41.7	73.9	84.6	83.6
	August	35.5	141.0	43.3	73.4	86.5	85.1
	September	36.5	141.1	44.4	72.8	85.9	84.7
	October	36.0	140.1	44.3	77.2	85.9	85.4
	November	36.5	162.5	46.7	77.8	86.7	86.4
	December	35.8	161.8	45.9	80.7	87.6	87.5
1976	January	38.3	164.0	48.7	88.2	90.1	90.6
	February	39.7	165.3	50.1	88.2	93.8	94.1
	March	39.4	164.5	49.9	86.8	92.0	92.2
	April	40.5	164.3	51.5	89.0	96.5	96.4
	May	42.2	165.0	52.7	87.4	99.2	98.5
	June	43.7	166.6	54.0	89.8	99.4	98.8
	July	43.8	168.4	53.8	94.6	102.7	102.0
	August	56.4	167.7	65.7	98.2	105.3	104.6
	September	68.6	183.7	77.9	103.9	93.1	94.7
	October	57.6	190.1	69.3	106.7	105.8	106.2
	November	52.6	182.4	63.6	113.5	106.7	107.5
	December	54.0	189.4	65.7	132.1	117.8	118.6
1977	January	R59.4	R203.3	R71.6	R143.2	R124.3	125.4
	February	63.6	199.0	76.5	131.0	130.0	130.7
	March	69.8	200.4	83.4	129.8	132.2	132.5
	April	65.2	190.7	76.4	128.4	130.9	131.1
	May	69.1	191.3	80.4	128.4	133.9	133.6
	June	69.2	189.1	79.6	125.6	135.1	134.2
	July	72.1	187.7	81.8	134.5	135.9	135.8
	August	71.1	185.5	81.5	133.9	134.0	134.0
	September	71.8	194.7	84.0	131.8	135.7	135.4
	October	74.2	211.9	87.4	133.9	135.6	135.6
	November	74.3	214.2	87.1	134.9	141.7	141.5
	December	73.9	216.5	86.8	138.5	132.2	133.1
1978	January	74.0	211.2	86.4	150.4	138.2	139.2

*Represents direct sales by pipeline companies to industrial users. Does not include sales to industrial users by resellers.

**Includes the cost of gas to the distributing utility at entrance of distribution system or point of receipt.

R=Revised.

Source: Federal Power Commission Form 11, "Natural Gas Pipeline Company Monthly Statement."

Intrastate Natural Gas Prices for Selected States by Type of Contract*

	California		Kansas		Louisiana		Oklahoma		Texas	
	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended	New Contracts	Renegotiated or Amended
Cents per thousand cubic feet										
1975										
January	75.00	76.89	55.30	—	98.04	102.96	95.99	76.03	139.90	164.04
February	—	—	—	—	128.68	113.06	97.30	64.49	154.72	163.11
March	—	—	—	—	115.78	125.89	107.70	55.05	96.66	97.50
April	—	—	64.65	45.24	149.78	134.81	132.58	87.79	160.09	176.32
May	—	—	—	—	126.80	123.53	129.31	106.56	156.72	158.59
June	—	53.68	65.00	—	130.91	129.57	94.22	120.29	165.00	187.54
July	—	65.51	—	—	117.22	125.63	133.87	114.62	183.22	178.22
August	—	75.00	198.24	—	132.87	114.20	136.77	121.21	151.87	132.50
September	—	86.00	152.89	70.38	121.89	141.23	143.73	106.69	169.87	180.77
October	135.53	—	—	—	75.16	117.60	143.09	144.14	168.10	187.30
November	—	—	157.95	139.02	138.42	71.65	140.61	133.15	149.43	182.17
December	—	—	—	80.00	139.64	131.92	132.50	153.86	187.20	140.90
1976										
January	—	83.97	103.81	84.54	138.75	131.23	149.87	109.39	181.05	193.31
February	—	40.00	—	109.68	125.00	145.30	133.72	146.71	176.63	191.54
March	—	—	150.36	—	145.66	155.39	162.83	168.57	178.70	176.44
April	195.00	—	150.00	—	142.99	154.05	162.12	148.30	202.60	152.95
May	122.00	60.39	180.39	149.84	125.54	106.05	156.35	164.02	154.00	197.22
June	—	—	114.45	150.82	147.11	137.67	169.56	168.14	178.01	192.98
July	—	117.15	137.57	150.83	127.55	141.71	148.20	95.00	151.19	176.23
August	—	97.38	—	—	138.70	164.23	151.81	171.49	157.98	198.81
September	—	—	—	125.68	164.10	156.39	164.85	172.00	184.07	197.66
October	—	—	—	111.72	144.64	149.91	163.48	161.16	196.58	188.80
November	—	—	150.82	144.21	—	131.91	162.57	90.73	186.80	182.82
December	—	97.47	160.73	—	194.51	152.45	167.55	175.98	198.71	202.54
1977										
January	—	105.58	155.49	—	155.82	137.65	172.35	167.49	193.36	204.06
February	—	107.27	121.66	—	141.33	120.84	147.86	131.27	185.55	203.22
March	119.79	116.28	148.18	—	219.43	208.97	168.57	168.28	197.14	190.83
April	—	—	137.10	156.38	216.41	150.35	165.61	167.89	192.22	205.44
May	—	107.20	119.00	—	197.53	158.97	156.52	171.09	204.06	201.27
June	—	112.21	91.49	—	180.21	169.61	166.69	169.51	194.54	206.41
July	—	139.02	88.57	174.53	174.90	169.64	172.95	168.25	206.96	202.46
August	—	—	131.97	90.49	177.99	166.66	164.33	158.46	188.96	183.57
September	—	—	—	136.66	163.72	162.49	171.78	172.70	167.14	212.44

*Prices are for FERC jurisdictional natural gas companies selling more than 1 billion cubic feet per year in interstate commerce.
Source: Federal Power Commission Form 45, "Summary of Intrastate Natural Gas Prices."

Natural Gas (Continued)

Average Retail Prices for Natural Gas Sold to Residential Customers for Heating Use

		Cents per thousand cubic feet
1975	January	141.2
	February	144.7
	March	146.1
	April	150.6
	May	153.7
	June	155.7
	July	154.7
	August	155.4
	September	159.4
	October	160.6
	November	166.2
	December	170.2
1976	January	171.4
	February	175.2
	March	177.0
	April	178.4
	May	180.8
	June	183.2
	July	184.5
	August	185.8
	September	191.2
	October	195.0
	November	198.3
	December	208.3
	AVERAGE	185.8
1977	January	213.8
	February	217.0
	March	219.9
	April	223.7
	May	227.0
	June	227.3
	July	229.9
	August	230.1
	September	230.4
	October	235.1
	November	238.4
	December	237.3
1978	January	241.6
	February	243.0
	March	247.0

Source: Bureau of Labor Statistics.

Utility Fossil Fuels

U.S. Average Delivered Prices of Coal at Utilities

		Contract	Spot
		Dollars per short ton	
1975	January	14.57	28.12
	February	15.71	25.93
	March	15.68	25.02
	April	15.88	24.52
	May	16.45	23.78
	June	16.40	23.36
	July	16.06	22.35
	August	16.65	22.39
	September	16.76	22.46
	October	16.72	22.52
	November	16.79	22.50
	December	16.90	22.40
1976	January	16.53	21.75
	February	17.04	21.23
	March	17.65	21.36
	April	17.76	21.43
	May	18.12	21.17
	June	18.05	20.88
	July	17.93	21.00
	August	18.19	21.35
	September	18.55	21.46
	October	18.49	21.28
	November	18.26	21.56
	December	18.15	21.49
1977	January	17.87	21.93
	February	18.28	22.71
	March	18.75	23.27
	April	18.82	22.41
	May	18.97	23.73
	June	19.03	24.62
	July	19.35	25.13
	August	18.95	24.73
	September	19.75	26.14
	October	20.31	26.83

Source: Federal Power Commission Form 423.

Utility Fossil Fuels (Continued)

COST OF FOSSIL FUELS DELIVERED TO STEAM ELECTRIC UTILITY PLANTS

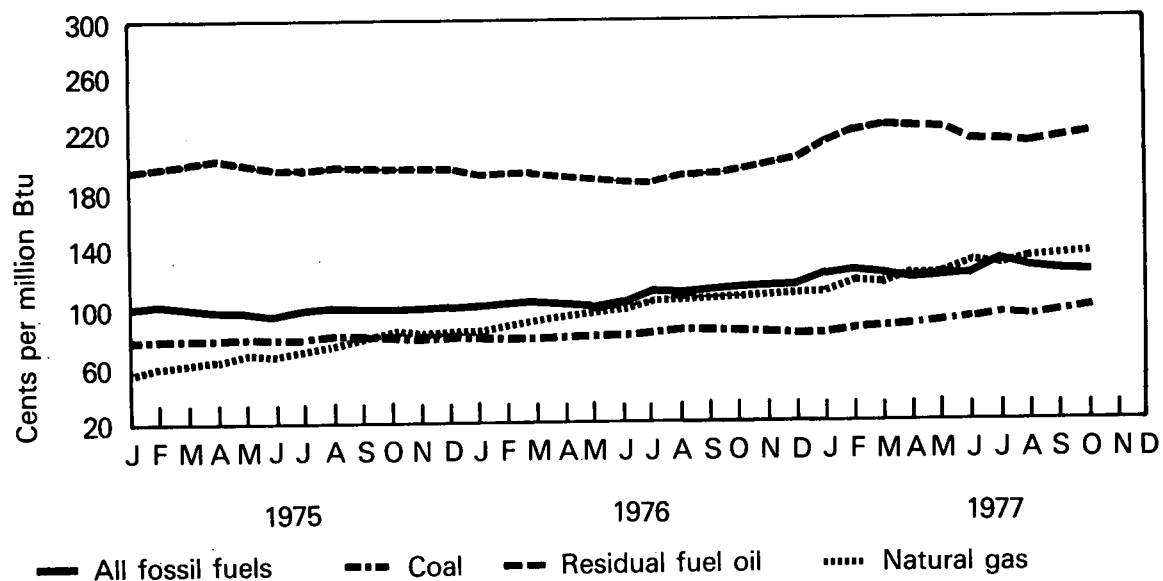
All Fossil Fuels*

Region	1976			1977									
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
Cents per million Btu													
New England	184.0	186.9	197.0	207.7	211.4	225.3	213.9	215.1	213.3	209.9	206.7	206.8	205.2
Middle Atlantic	136.8	139.8	146.5	161.8	162.1	152.2	149.9	149.4	152.1	167.9	158.8	151.3	144.8
East North Central	95.8	96.8	94.4	104.1	102.7	104.0	102.6	103.9	107.3	109.7	105.2	106.5	108.8
West North Central	73.5	76.1	78.5	85.4	85.3	82.0	79.0	82.5	84.0	87.9	86.2	86.5	89.2
South Atlantic	127.2	129.1	134.7	146.5	142.5	137.3	132.7	133.8	137.9	148.9	146.6	143.7	137.6
East South Central	93.8	92.3	96.7	99.8	101.8	100.1	100.3	102.3	104.5	110.4	106.6	109.9	112.0
West South Central	101.6	106.2	106.9	113.6	119.8	116.9	117.5	117.2	124.3	123.2	122.5	123.2	121.3
Mountain	55.4	54.2	53.9	53.0	55.2	60.4	64.3	68.8	69.9	71.8	72.6	73.7	74.7
Pacific	199.1	214.5	218.9	219.2	213.6	209.8	217.6	219.0	212.6	221.2	223.8	221.2	238.7
NATIONAL AVG.	111.1	115.2	118.6	126.8	128.4	123.5	122.0	123.1	125.1	133.2	129.4	128.6	127.6

*See Explanatory Note 19.

Source: Federal Power Commission Form 423.

National Average



Coal

Region	1976			1977									
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
Cents per million Btu													
New England	125.6	125.6	124.4	127.6	126.8	127.5	127.9	128.1	130.1	130.6	133.1	134.0	122.4
Middle Atlantic	102.6	100.2	101.2	105.9	101.2	100.8	102.5	103.1	107.4	111.7	107.0	106.0	104.6
East North Central	89.2	90.2	90.7	90.7	91.5	94.1	93.9	94.3	95.5	99.8	97.3	99.5	101.7
West North Central	69.3	69.6	67.6	66.5	68.4	71.5	72.5	75.5	77.0	77.9	77.4	78.5	84.3
South Atlantic	105.4	103.8	104.1	105.4	106.5	108.1	108.4	110.9	113.9	119.2	115.9	121.1	122.0
East South Central	88.3	87.4	90.6	91.2	94.1	93.6	96.5	95.8	95.0	99.9	98.4	103.1	104.3
West South Central	43.7	51.5	56.6	58.8	61.1	64.3	60.2	60.3	63.9	59.2	62.1	64.4	65.2
Mountain	38.2	39.1	38.1	37.6	38.9	41.1	42.4	46.3	47.4	43.0	50.1	47.5	51.4
Pacific	76.0	75.6	74.5	77.6	80.5	74.0	70.8	70.9	71.2	71.7	71.1	71.3	71.4
NATIONAL AVG.	86.9	86.6	86.6	85.9	88.0	89.9	90.1	91.8	93.3	96.2	94.3	98.0	100.5

Residual Fuel Oil*

Region	1976			1977									
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
Cents per million Btu													
New England	188.1	192.0	198.9	213.6	223.5	231.7	218.5	223.4	216.2	212.5	211.3	210.2	210.8
Middle Atlantic	199.5	200.5	208.3	220.5	235.8	237.2	230.8	227.7	223.1	220.5	218.5	220.8	225.8
East North Central	225.8	223.9	227.9	247.5	267.7	257.8	256.3	250.9	248.6	247.1	241.6	264.7	256.5
West North Central	156.8	167.9	191.5	201.0	210.3	205.5	298.7	193.6	186.6	179.0	185.0	186.9	185.3
South Atlantic	184.1	189.2	197.0	212.4	213.7	222.8	217.8	211.7	210.1	207.2	199.2	211.0	211.4
East South Central	166.6	167.8	166.4	166.2	182.7	180.4	180.5	175.7	177.7	175.9	178.3	177.7	186.5
West South Central	176.6	180.3	179.9	192.0	198.1	201.9	200.3	198.3	194.3	187.6	188.5	184.2	192.6
Mountain	221.9	209.3	181.2	201.0	210.9	220.9	220.6	224.9	215.3	232.5	230.7	216.4	214.3
Pacific	231.2	234.1	233.4	231.3	231.0	232.1	235.8	235.2	235.7	240.0	240.1	240.6	241.6
NATIONAL AVG.	198.8	203.5	207.5	217.2	223.3	228.0	226.2	227.7	217.8	217.0	213.0	218.3	220.3

Natural Gas**

Region	1976			1977									
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT
Cents per million Btu													
New England	155.4	185.2	186.1	200.1	200.1	200.1	200.1	195.9	193.9	185.8	187.2	188.1	185.3
Middle Atlantic	125.2	111.9	127.8	211.3	349.8	155.9	155.4	154.7	144.2	165.5	162.4	165.1	162.6
East North Central	153.0	168.8	188.9	186.5	174.7	170.6	184.7	176.7	177.3	183.5	185.9	183.7	182.3
West North Central	80.8	84.1	84.0	86.1	93.4	88.8	96.0	102.9	104.8	106.7	106.8	109.0	103.8
South Atlantic	89.3	89.1	90.4	80.4	112.1	93.6	85.7	76.2	74.4	91.1	100.9	91.7	94.2
East South Central	158.5	162.2	160.8	165.1	170.3	157.8	154.7	139.7	134.3	148.5	149.9	135.7	138.6
West South Central	101.0	106.6	106.8	108.1	114.6	111.2	113.7	116.5	122.1	122.5	123.7	123.7	122.5
Mountain	112.2	118.2	136.0	133.3	115.0	129.1	134.9	134.4	132.9	133.3	130.7	149.8	136.9
Pacific	169.0	177.5	188.7	196.8	189.2	181.0	204.5	208.9	200.5	211.0	218.8	217.9	219.7
NATIONAL AVG.	109.9	113.1	111.3	111.1	123.5	121.1	125.6	125.6	130.5	131.7	135.4	138.4	139.4

*See Explanatory Note 19.

**Includes small quantities of coke oven gas, refinery gas, and blast furnace gas.

Source: Federal Power Commission Form 423.

International

Petroleum Consumption

Petroleum consumption figures for all 12 months of 1977 are now available for Japan, West Germany, France, the United Kingdom, Canada, and Italy.

France, Italy, and West Germany all showed decreased consumption in 1977 of 4.9 percent, 1.8 percent, and 1.2 percent, respectively, from 1976 levels. On the other hand, consumption in Japan, the United Kingdom, and Canada increased in 1977 by 4.6 percent, 2.4 percent, and 0.4 percent, respectively, from the previous year's levels.

Member countries of the International Energy Agency as a whole (including the United States) showed a 3.8-percent increase in petroleum use for the first 11 months of 1977.

Crude Oil Production

World crude oil production in February rose 1.1 million barrels per day (MMBD) to 58.0 MMBD. Production by the Organization of Petroleum Exporting Countries (OPEC) also rose 1.1 MMBD to 28.4 MMBD, with the largest increases reported by Saudi Arabia, Iraq, Iran, and the United Arab Emirates, totaling 1.2 MMBD. These increases were offset somewhat by decreased production in Venezuela, Nigeria, and Ecuador.

Petroleum Consumption

Petroleum Consumption for Major Free World Industrialized Countries

		Total IEA*	Japan**	West Germany	France***	United Kingdom	Canada	Italy†	Other IEA††
Thousands of barrels per day									
1973	AVG.	33,600	5,000	2,693	2,219	1,974	1,597	1,525	3,467
1974	AVG.	32,390	4,872	2,408	2,094	1,857	1,630	1,521	3,449
1975	Jan	34,100	4,729	2,183	2,190	1,981	1,691	1,792	3,741
	Feb	34,100	5,191	2,455	2,243	1,907	1,872	1,767	3,825
	Mar	31,600	4,918	2,234	1,952	1,731	1,558	1,558	3,285
	Apr	31,200	4,202	2,431	2,202	1,826	1,592	1,530	3,578
	May	28,600	4,041	2,253	1,640	1,482	1,471	1,174	3,058
	June	29,300	4,135	2,106	1,642	1,416	1,550	1,289	3,195
	July	29,400	4,265	2,319	1,491	1,322	1,493	1,234	2,961
	Aug	29,200	4,234	2,360	1,300	1,208	1,449	1,105	3,082
	Sept	30,400	4,543	2,309	1,785	1,501	1,469	1,465	3,338
	Oct	31,000	4,409	2,328	1,917	1,707	1,555	1,679	2,981
	Nov	31,000	4,747	2,361	2,077	1,723	1,577	1,448	3,423
	Dec	35,100	5,447	2,502	2,658	1,821	1,880	1,600	3,863
	AVG.	31,235	4,568	2,319	1,925	1,633	1,595	1,468	3,382
1976	Jan	35,100	4,941	2,464	2,436	1,679	1,785	1,775	3,858
	Feb	34,400	5,246	2,497	2,486	1,865	1,754	1,743	3,866
	Mar	34,300	5,165	2,747	2,381	1,879	1,747	1,641	3,822
	Apr	31,500	4,526	2,339	2,100	1,716	1,518	1,423	3,307
	May	29,900	4,218	2,320	1,796	1,417	1,509	1,253	3,206
	June	31,300	4,429	2,393	1,593	1,416	1,560	1,236	3,430
	July	31,100	4,416	2,624	1,629	1,346	1,531	1,355	3,215
	Aug	31,100	4,461	2,515	1,668	1,296	1,585	1,372	3,229
	Sept	32,200	4,517	2,521	1,974	1,501	1,514	1,604	3,718
	Oct	32,300	4,523	2,391	1,904	1,568	1,560	1,464	3,742
	Nov	35,900	5,160	2,700	2,236	1,750	1,822	1,393	4,228
	Dec	39,100	5,846	2,571	2,712	1,869	2,008	1,779	4,521
	AVG.	33,180	4,786	2,507	2,075	1,627	1,658	1,503	3,678
1977	Jan	37,700	5,434	2,389	2,518	1,830	1,797	1,696	4,073
	Feb	38,600	6,025	2,441	2,386	1,844	1,919	1,822	4,122
	Mar	35,000	5,548	2,519	2,109	1,818	1,664	1,573	3,822
	Apr	32,800	4,715	2,425	2,044	1,670	1,526	1,326	3,568
	May	31,300	4,315	2,359	1,846	1,545	1,523	1,268	3,330
	June	32,900	4,485	2,495	1,715	1,477	1,633	1,340	3,422
	July	31,800	4,717	2,381	1,348	1,321	1,530	1,251	3,047
	Aug	R32,700	4,709	2,468	1,390	1,371	1,691	1,140	R3,312
	Sept	R33,300	4,742	2,566	1,781	1,580	1,575	1,453	R3,651
	Oct	R33,400	4,669	2,324	1,882	1,570	1,637	1,452	R3,554
	Nov	R34,300	5,100	2,571	2,181	1,925	1,683	1,605	R3,964
	Dec	NA	5,832	2,719	2,519	1,930	1,943	1,817	NA
	AVG.	R33,948	5,019	2,478	1,974	1,667	1,664	1,476	R3,319

(Year to date)

*The 19 signatory nations of the International Energy Agency (IEA) are: Austria, Belgium, Canada, Denmark, Federal Republic of Germany, Greece, Ireland, Italy, Japan, Luxembourg, Netherlands, New Zealand, Norway, Spain, Sweden, Switzerland, Turkey, United Kingdom, and United States. Except for the United States, inland consumption excludes bunkers, refinery fuel, and losses.

**Excludes liquefied petroleum gases and condensates.

***Not a member of IEA.

†Principal products only.

††Excludes the United States.

NA=Not available.

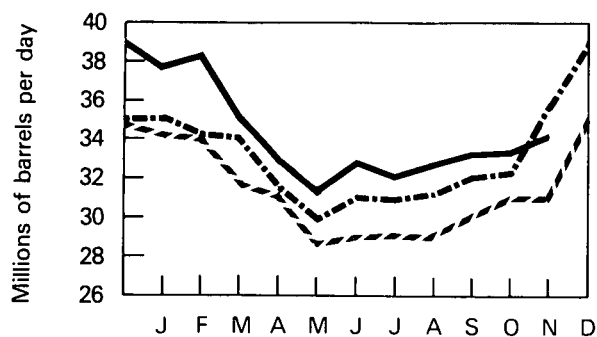
R=Revised data.

Note: All Total IEA, Other IEA, and recent figures are estimates.

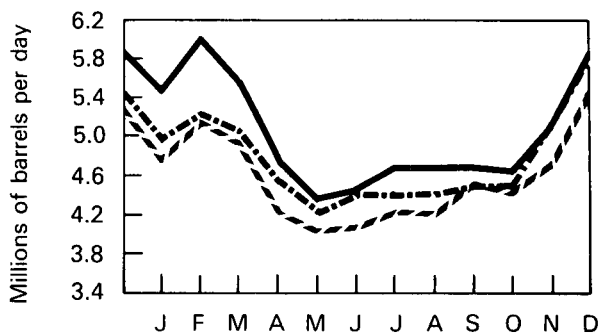
Source: Central Intelligence Agency, National Foreign Assessment Center, *International Energy Statistical Review*, 19 April 1978.

Petroleum Consumption

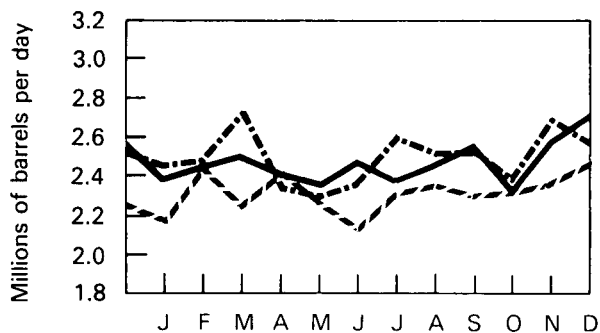
Total IEA



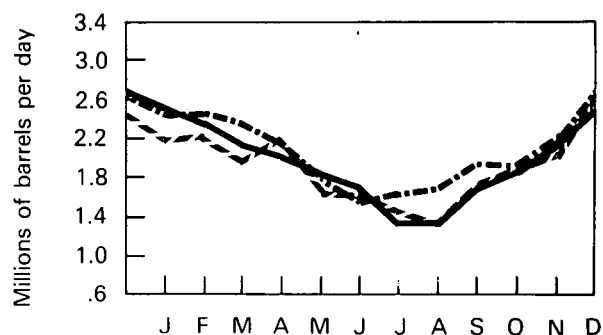
Japan*



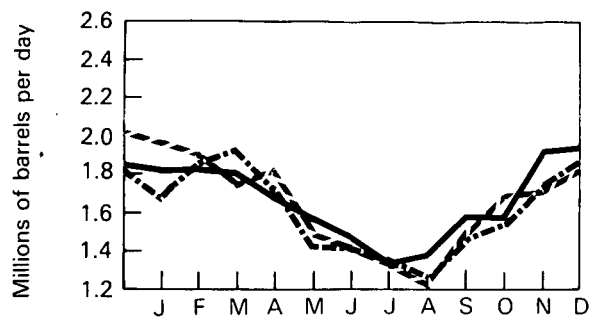
West Germany



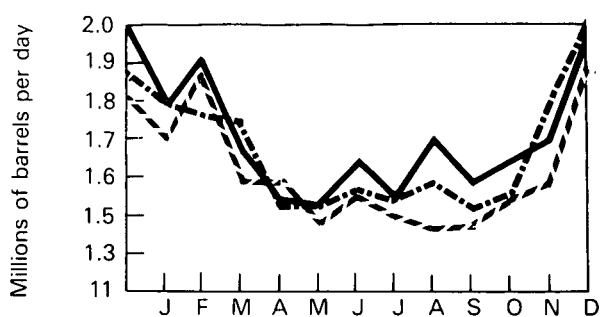
France**



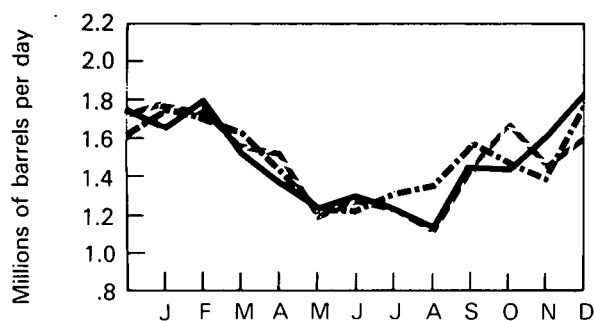
United Kingdom



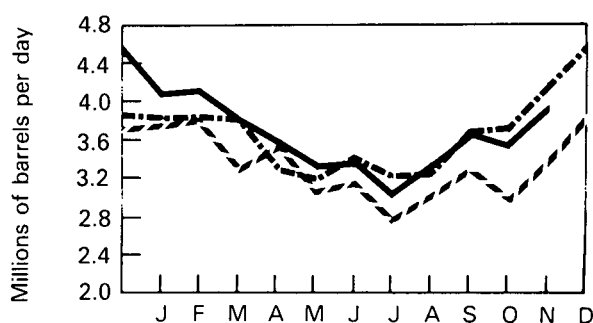
Canada



Italy***



Other IEA†



*Excludes liquefied petroleum gases and condensates.

**Not a member of IEA.

***Principal products only.

†Excludes the United States.

--- 1975
- - - 1976
— 1977

Crude Oil Production

Crude Oil Production for Major Petroleum Exporting Countries—February 1978

Country	Production							Production Capacity	Production Shut in
	1972 Year	1973 Year	1974 Year	1975 Year	1976 Year	1977 Year	1978 February**	February	February
Thousands of barrels per day									
Algeria	1,040	1,070	960	960	990	1,020	1,000	1,080	7.4
Iraq	1,465	2,020	1,970	2,260	2,415	2,330	2,300	3,000	23.3
Kuwait*	3,283	3,020	2,545	2,085	2,145	1,970	1,730	3,300	47.6
Libya	2,239	2,175	1,520	1,480	1,935	2,090	1,910	2,300	17.0
Qatar	482	570	520	440	495	430	480	600	20.0
Saudi Arabia*	6,016	7,595	8,480	7,075	8,575	9,200	8,340	10,500	20.6
United Arab Emirates	1,202	1,535	1,680	1,665	1,935	2,010	1,880	2,290	17.9
Subtotal: Arab OPEC	15,727	17,985	17,675	15,965	18,490	19,050	17,640	23,070	23.5
Ecuador	78	210	175	160	185	180	170	225	24.4
Gabon	125	150	200	225	225	230	220	250	12.0
Indonesia	1,080	1,340	1,375	1,305	1,505	1,690	***1,710	1,700	—
Iran	5,023	5,860	6,020	5,350	5,885	5,660	5,530	R6,500	14.9
Nigeria	1,815	2,055	2,255	1,785	2,070	2,100	1,570	2,300	31.7
Venezuela	3,219	3,365	2,975	2,345	2,295	2,240	1,620	2,600	37.7
Subtotal: Non-Arab OPEC	11,340	12,980	13,000	11,170	12,165	12,100	10,820	R13,575	20.3
TOTAL OPEC	27,067	30,965	30,675	27,135	30,655	31,150	28,460	R36,645	22.3
Canada	1,540	1,800	1,695	1,460	1,300	R1,320	1,298	1,800	27.9
Mexico	440	465	580	720	850	R980	1,120	1,120	0
TOTAL OPEC, Canada, Mexico	29,047	33,230	32,950	29,315	32,805	R33,450	30,878	R39,565	22.0
TOTAL WORLD	50,550	55,755	55,875	52,990	57,340	R59,490	58,000		

*Includes about one-half of the former Kuwait-Saudi Arabia Neutral Zone. Production in February 1978 amounted to approximately 320,000 barrels per day.

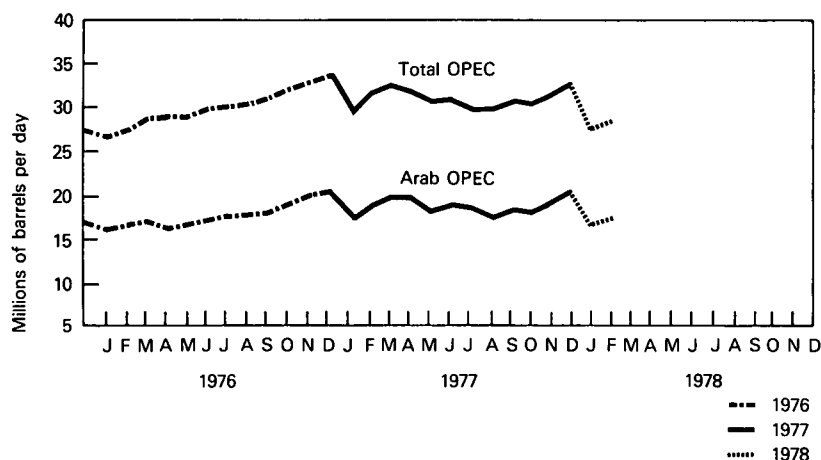
**Estimated.

***Production may exceed capacity for brief periods of time.

R = Revised.

Sources: Central Intelligence Agency, National Foreign Assessment Center, *International Energy Statistical Review*, 19 April 1978, and National Energy Board of Canada.

OPEC Countries Crude Oil Production



Definitions

Base Production Control Level

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold from a particular property in the same month of 1972. If domestic crude oil was not produced and sold from that property in every month of 1972, the total number of barrels of domestic crude oil produced and sold from that property in 1972, divided by 12.

2. Effective February 1, 1976: the total number of barrels of old crude oil produced and sold from the property during calendar year 1975, divided by 365, and multiplied by the number of days in the particular month during 1975. A producer may elect to use the total number of barrels of crude oil produced and sold from the property during calendar year 1972, divided by 366, and multiplied by the number of days in the particular month during 1972.

Branded Independent Marketer

A firm which is engaged in the marketing or distribution of refined petroleum products pursuant to (1) an agreement or contract with a refiner (or a firm which controls, is controlled by, or is under common control with such refiner) to use a trademark, trade name, service mark, or other identifying symbol or name owned by such refiner (or any such firm), or (2) an agreement or contract under which any such firm engaged in the marketing or distribution of refined petroleum products is granted authority to occupy premises owned, leased, or in any way controlled by a refiner (or firm which controls, is controlled by, or is under common control with such refiner), but which is not affiliated with, controlled by, or under common control with any refiner (other than by means of a supply contract, or an agreement or contract described in parts (1) and (2) of this definition), and which does not control such refiner.

Ceiling Price

The maximum permissible selling price, prior to February 1, 1976, for a particular grade of domestic crude oil in a particular field is the May 15, 1973, posted price plus \$1.35 per barrel.

Controlled Crude Oil

Crude oil that was domestically produced prior to February 1, 1976, subject to the ceiling price for crude oil. For a particular property which is not a stripper well lease, the volume of controlled oil equals the base production control level minus an amount of released oil equal to the new oil production from that property.

Crude Oil Domestic Production

Domestic crude oil production is measured at the wellhead and includes lease condensate, which is a natural gas liquid recovered from lease separators or field facilities.

Crude Oil Entitlement Value

The average value a refiner receives from the entitlement program for each incremental barrel of imported crude oil.

It is calculated by multiplying the entitlement price by the National Old Oil Supply Ratio for November 1974 through January 1976 and by the National Domestic Crude Oil Supply Ratio for February 1976 forward.

Crude Oil Imports

The volume of crude oil imported into the 50 States and the District of Columbia, including imports from U.S. territories, but excluding imports of crude oil into the Hawaiian Foreign Trade Zone.

Crude Oil Input to Refineries

Total crude oil input to crude oil distillation units and other units for processing.

Crude Oil Stocks

Stocks of crude oil and lease condensate held at refineries, pipeline terminals, and on leases.

Cumulative Deficiency

A measure of the cumulative deficit of production below the base production control level after the first month in which new oil was produced and sold from a specific property.

Dealer Tankwagon (DTW) Price

The price at which a dealer purchases gasoline from a distributor or a jobber.

Distillate Fuel Oil

The lighter fuel oils distilled off during the refining process. Included are products known as ASTM grades Nos. 1 and 2 heating oils, diesel fuels, and No. 4 fuel oil. The major uses of distillate fuel oils include heating, fuel for on- and off-highway diesel engines, and railroad diesel fuel. Minor quantities of distillate fuel oils produced and/or held as stocks at natural gas processing plants are not included in this series.

Domestic Demand for Specific Refined Petroleum Products

A calculated value, computed as domestic production plus net imports (imports less exports), less the net increase in primary stocks. It, therefore, represents the total disappearance of refined products from primary supplies. (See definition for Domestic Demand for Total Refined Petroleum Products.)

Domestic Demand for Total Refined Petroleum Products

Total domestic demand for petroleum products is calculated as inputs to refineries, plus estimated refinery gain, plus hydrogen input, plus natural gas plant liquids production, plus direct use of crude as fuel, plus product imports, less product exports, plus or minus stock change of products. (See definition for Domestic Demand for Specific Refined Petroleum Products.)

Electricity Production

Production at electric utilities only. Does not include industrial electricity generation.

Entitlement Position

The monthly entitlement position of a refiner indicates whether he bought or sold entitlements in that month. An entitlement is the right to process "deemed old oil," which is the sum of a refiner's receipts of "old" oil and a fraction of his receipts of "upper tier" crude oil. This fraction is set monthly by ERA. A refiner must purchase entitlements for the amount of his "deemed old oil" receipts in excess of the national domestic crude oil supply ratio (NDCOSR). The NDCOSR, as calculated by ERA, reflects the differences in costs to refiners of "old" oil, "upper tier" crude oil, and imported crude oil.

Entitlement Price

The price of an entitlement, fixed by ERA, is the exact differential as reported for the month between the weighted average delivered cost per barrel to refiners of both imported crude oil and stripper crude oil, and the weighted average delivered cost per barrel to refiners of "old oil," less 21 cents.

Firm Natural Gas Service

High priority gas service in which the pipeline company is under contract to deliver a specified volume of gas to the customer on a non-interruptible basis. Residential and small commercial facilities usually fall into this category.

Interruptible Natural Gas Service

Low priority gas service in which the pipeline company has the contractual option to temporarily terminate deliveries to customers by reason of claim of firm service customers or higher priority users. Large commercial facilities, industrial users, and electric utilities usually fall into this category.

Jet Fuel

Includes both naphtha-type and kerosene-type fuels meeting standards for use in aircraft turbine engines. Although most jet fuel is used in aircraft, some is used for other purposes, such as for generating electricity in gas turbines.

Jobber

A petroleum distributor who purchases refined product from a refiner or terminal operator for the purpose of reselling to retail outlets and commercial accounts or for the purpose of retailing through his own retail outlets.

Jobber Margin

The difference between the price at which a jobber purchases refined product from a refiner or terminal operator and the price at which the jobber sells to retail outlets. This does not reflect margins obtained by jobbers through retail sales or commercial accounts.

Jobber Price

The price at which a petroleum jobber purchases refined product from a refiner or terminal operator.

Landed Cost

The cost of imported crude oil equal to actual cost of the crude oil at point of origin plus transportation cost to the United States.

Limited Work Authorization

A Limited Work Authorization (LWA) may be granted by the Atomic Safety and Licensing Board of the Nuclear Regulatory Commission to an applicant who wants to construct a nuclear powerplant providing that the project has been cleared for all requirements of the National Environmental Protection Act and that the geologic and topographic suitability of the reactor site has been found satisfactory. The LWA allows an applicant to proceed with site excavation, install temporary construction and service facilities, construct service roads, and erect structures and components not subject to normal quality assurance inspections. It may save a utility from 6 to 8 months in total construction time. However, because the ultimate approval of a construction permit is based on all evidence revealed during the licensing hearings, the successful award of an LWA is no guarantee that a construction permit will also be granted.

Line Miles of Seismic Exploration

The distance along the earth's surface that is covered by seismic traverses.

Lower Tier Crude Oil

Old crude oil.

Lower Tier Ceiling Price Determination

The lower tier ceiling price for a particular grade of domestic crude oil in a particular field is the sum of (1) the highest posted price at 6 a.m., local time, May 15, 1973, for transactions in that grade of crude oil in that field; or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; and (2) the amount mandated in the Monthly Price Adjustment Schedules published by ERA in the *Federal Energy Guidelines* (Part 212.77-13847 Appendix).

Major Brand

Lundberg Survey, Inc., defines major brand as an integrated company that produces, refines, transports, and markets in Interstate Commerce under its own brand(s) in 10 or more States.

Motor Gasoline Production

Total production of motor gasoline by refineries, measured at the refinery outlet. Relatively small quantities of motor gasoline are produced at natural gas processing plants, but these quantities are not included.

Motor Gasoline Stocks

Primary motor gasoline stocks held by gasoline producers. Stocks at natural gas processing plants are not included.

National Domestic Crude Oil Supply Ratio

Old oil receipts adjusted for upper-tier receipts, small refiner bias, and other minor adjustments, divided by crude runs to stills adjusted for residual fuel entitlements.

National Old Oil Supply Ratio

Old oil receipts, adjusted for small refiner bias and exemptions, divided by crude runs to stills adjusted for entitlements issued for imported refined products.

Natural Gas Liquids (NGL)

Products obtained from natural gasoline plants, cycling plants and fractionators after processing the natural gas. Included are ethane, liquefied petroleum (LP) gases (propane, butane, and propane-butane mixtures), natural gasoline, plant condensate, and minor quantities of finished products such as gasoline, special naphthas, jet fuel, kerosene, and distillate fuel oil.

New Crude Oil

1. Prior to February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the base production control for that month and less the current cumulative deficiency.
2. Effective February 1, 1976: the total number of barrels of domestic crude oil produced and sold in a specific month, less the property's base production control level for that month and less the current cumulative deficiency since February 1, 1976.

Nonbranded Independent Marketer

A firm which is engaged in the marketing or distribution of refined petroleum products, but which (1) is not a refiner, (2) is not a firm which controls, is controlled by, is under common control with, or is affiliated with a refiner (other than by means of a supply contract), and (3) is not a branded independent marketer.

Old Crude Oil

1. Prior to February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month and less the total number of barrels of released crude oil for that property in that month.
2. Effective February 1, 1976: the total number of barrels of crude oil produced and sold from a property in a specific month, less the total number of barrels of new crude oil for that property in that month.

Primary Stocks of Refined Petroleum Products

Stocks held at refineries, bulk terminals, and pipelines. They do not include stocks held in secondary storage

facilities, such as those held by jobbers, dealers, independent marketers, and consumers.

Property

Prior to August 26, 1976, a property was defined as the right to produce domestic crude oil, which arises from a lease or from a fee interest. This definition was interpreted to apply only to a surface lease. In August 1976 the definition of a property was changed so that a producer may treat as a separate property each separate and distinct producing reservoir subject to the same right to produce crude oil, provided that such reservoir is recognized by the appropriate governmental regulatory authority as a producing formation that is separate and distinct from, and not in communication with, any other producing formation. Although this new definition was not implemented until August 26, 1976, it was made effective retroactively to February 1, 1976. (F.R. 36171, August 26, 1976)

Refined Petroleum Products Imports

Imports (into the 50 States and the District of Columbia) of motor gasoline, naphtha-type jet fuel, kerosene type jet fuel, kerosene, distillate fuel oil, residual fuel oil, liquefied petroleum gases, petrochemical feedstocks, special naphtha, lubricants, waxes, asphalt, plant condensate, and unfinished oils. Included are imports of refined products for bonded and military use, and imports from U.S. territories and the Hawaiian Foreign Trade Zone.

Refiner Acquisition Cost

The cost to the refiner, including transportation and fees, of crude petroleum. The composite cost is the average of domestic and imported crude costs and represents the amount of crude cost which refiners may pass on to their customers.

Released Crude Oil

An amount of crude oil produced from a property in a particular month prior to February 1, 1976, which is equal to the total number of barrels of new crude oil produced and sold from that property in that month. The amount of released crude oil for a property in a particular month shall not exceed the base production control level for that property in that month.

Residual Fuel Oil

The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are boiled off in refinery operations. Included are products known as ASTM grades Nos. 5 and 6 oil, heavy diesel oil, Navy Special Oil, Bunker C oil, and acid sludge and pitch used as refinery fuels. Residual fuel oil is used for the production of electric power, for heating, and for various industrial purposes.

Rotary Rig

Machine used for drilling wells that employs a rotating tube attached to a bit for boring holes through rock.

Separative Work Unit (SWU)

The measure of work required to produce enriched uranium from natural uranium. Enrichment plants separate natural uranium feed material into two groups, an enriched product group with a higher percentage of U-235 than the feed material and a depleted tails group with a lower percentage of U-235 than the feed material. To produce 1 kilogram of enriched uranium containing 2.8 percent U-235, and a depleted tails assay containing 0.3 percent U-235, it requires 6 kilograms of natural uranium feed and 3 kilograms of separative work units (3 SWU).

Startup Test Phase of Nuclear Powerplant

A nuclear powerplant that has been licensed by the Nuclear Regulatory Commission to operate, but that is in the initial testing phase during which production of electricity may not be continuous. In general, when the electric utility is satisfied with the plant's performance, it formally accepts the plant from the manufacturer, and places it in "commercial operation" status. A request is then submitted to the appropriate utility rate commission to include the powerplant in the rate base calculation.

Stripper Well Property

A property whose average daily production of crude oil per well (excluding condensate recovered in nonassociated production) did not exceed 10 barrels per day during any preceding consecutive 12-month period beginning after December 31, 1972.

Synthetic Natural Gas (SNG)

A product resulting from the manufacture, conversion, or reforming of petroleum hydrocarbons which may be easily substituted for or interchanged with pipeline quality natural gas.

Uncontrolled Crude Oil

That portion of domestic crude oil production including new, released, and stripper oil which, before February 1, 1976, could be sold at a price exceeding the ceiling price.

Unrecouped Costs

Costs which have not been recovered in the current month's product prices but which have been "banked" for later use.

Upper Tier Crude Oil

Effective February 1, 1976, upper tier crude oil included new crude oil and crude oil produced from a stripper well lease. Effective September 1, 1976, upper tier crude oil includes new crude oil only.

Upper Tier Ceiling Price Determination

The upper tier ceiling price for a particular grade of domestic crude oil in a particular field is (1) the highest posted price on September 30, 1975, for transactions in that grade of crude oil in that field in September 1975, or if there was no posted price in that field for that grade of domestic crude oil, the related price for that grade of

domestic crude oil which is most similar in kind and quality in the nearest field for which prices were posted; less (2) the amount mandated in the Monthly Price Adjustment Schedules published by ERA in the *Federal Energy Guidelines* (Part 212.77 .13847 Appendix).

Well

A hole drilled for the purpose of finding or producing crude oil or natural gas or providing services related to the production of crude oil or natural gas. Wells are classified as oil wells, gas wells, dry holes, stratigraphic tests, or service wells. This is a standard definition of the American Petroleum Institute.

Explanatory Notes

1. Domestic production of energy includes production of crude oil and lease condensate, natural gas (wet), and coal (anthracite, bituminous, and lignite), as well as electricity output from hydroelectric and nuclear powerplants and industrial hydroelectric power production. The volumetric data were converted to approximate heat contents (Btu-values) of the various energy sources using conversion factors listed in the Units of Measure.

2. U.S. imports of fossil fuels include imports of crude oil, refined petroleum products, and natural gas (dry).

3. Domestic consumption of energy includes domestic demand for refined petroleum products, consumption of coal (anthracite, bituminous, and lignite) and natural gas (dry), electricity output from hydroelectric and nuclear powerplants, industrial hydroelectric power production, and net imports of electric power. Approximate heat contents (Btu-values) were derived using conversion factors listed in the Units of Measure. Electricity imports were converted using the Btu-content of hydroelectric power. 1977 electricity imports were estimated on the basis of the import level for 1976.

4. Domestic demand figures for natural gas liquids (NGL) as reported by BOM and reproduced in this publication do not include amounts utilized by refineries for blending purposes in the production of finished products, principally gasoline. Use of NGL at refineries is reported in a separate column. The production series cited in this publication shows both NGL produced at processing plants and liquefied gases produced at refineries (LRG). NGL produced at refineries is extracted from crude oil and hence, to avoid double counting, should not be included in calculations of total U.S. production of petroleum liquids. The stock series shown in this volume includes natural gas liquids held as stocks at both natural gas processing plants and at refineries and LRG held at refineries.

5. Domestic consumption of natural gas includes the quantities sold to consumers plus the gas used for plant and pipeline fuel, after the natural gas liquids have been extracted. All monthly consumption data are estimated. Marketed production of natural gas includes gross withdrawals from the ground less the quantities used for repressuring and the amount vented and flared, before the natural gas liquids have been extracted.

6. The Federal Energy Administration and Federal Power Commission began the coordinated collection and compilation of monthly underground storage information from all underground storage operators in the United States in October 1975. Initial storage information reported was for the month of September 1975. Comparable monthly information for total U.S. storage operations is not available for prior periods.

The total gas in storage is the total volume of gas (base gas plus working gas) in storage reservoirs as of the end of the month. Base gas is the volume of gas, including all native gas in place at the time of conversion to storage, needed as a permanent inventory to maintain adequate reservoir pressures and deliverability rates throughout the withdrawal season. Base gas includes the volumes which will not be recoverable upon termination of storage

operations. Working gas is the volume of gas above the designated base gas level available for withdrawal.

7. Bituminous coal and lignite consumption is calculated by EIA from information provided by the Federal Power Commission, Department of Commerce, and reports from selected manufacturing industries and retailers. Domestic consumption data in this series, therefore, approximate actual consumption. This is in contrast to domestic demand reported for petroleum products, which is a calculated value representing total disappearance from primary supplies.

Bituminous coal and lignite production is calculated from the number of railroad cars loaded at mines, based on the assumption that approximately 60 percent of the coal produced is transported by rail. Production data are estimated by EIA from Association of American Railroads reports of carloadings.

8. Class A and B utilities are the only utilities required to report their number of customers on Form 5. Class A and B investor-owned utilities are defined, respectively, as those with annual sales that exceed \$2.5 million, and those with annual sales that are between \$1 million and \$2.5 million. In 1976 there were 212 Class A and B utilities; collectively they represented 80 percent of the total industry kilowatt-hour sales. In the month of June 1977 Class A and B utilities accounted for 77.9 percent of ultimate industrial sales, 74.7 percent of ultimate residential sales, and 85.2 percent of ultimate commercial sales.

9. Quantities of uranium are measured by various units at different stages in the fuel cycle. At the mill, quantities are usually expressed as pounds or short tons of U_3O_8 . After the conversion stage, the units of measure are either metric tons (MT) of UF_6 or metric tons of uranium (MTU). The later designation expresses only the elemental uranium content of UF_6 .

Following the enrichment stage, the same units are used, but the U-235 content has been enhanced at the expense of loss of material. At the fabrication stage, UF_6 is changed to UO_2 , and the standard unit of measure is the MTU. We have chosen to present all uranium quantities as MTU; conversion factors to other units are given in the Units of Measure section.

10. The units used to describe power generation at nuclear plants are based on the watt, which is a unit of power. (Power is energy produced per unit of time.) As with fossil-fueled plants, nuclear plants have three design power ratings. The thermal rating (expressed in thermal megawatts) is the rate of heat production by the reactor core. The gross electrical rating (expressed in electrical megawatts, MWe) is the generator capacity at the stated thermal rating of the plant. The net electrical rating (also expressed in MWe) is the power available as input to the electrical grid after subtracting the power needed to operate the plant. (A typical nuclear plant needs 5 percent of its generated electricity for its own operation.)

The electrical energy produced by a plant is expressed either as megawatt hours (MWh) or kilowatt hours (KWh). Tables in the nuclear section show generated electricity as average electrical power. This enables a more direct comparison to design capacity and to previous

months' performances. To obtain the quantity of electricity generated during a given time period (in kilowatt hours), multiply the average power level (in kilowatts) by the number of hours during that period.

The energy extracted from uranium fuel is expressed as thermal megawatt days per metric ton of uranium (MWD/MTU). The production of plutonium in the fuel rods is expressed as kilograms of plutonium per metric ton of discharged uranium (kg/MTU).

11. The Residential and Commercial Sector consists of housing units, non-manufacturing business establishments (e.g., wholesale and retail businesses), health and educational institutions, and government office buildings. The Industrial Sector is made up of construction, manufacturing, agriculture, and mining establishments. The Transportation Sector consists of both private and public passenger and freight transportation, as well as government transportation, including military operations. The Electric Utilities Sector is made up of privately- and publicly-owned establishments which generate electricity primarily for resale.

12. Degree-days relate demand for energy to outdoor air temperature. Cooling degree-days are defined as deviations of the mean daily temperature at a sampling station above a base temperature equal to 65°F by convention. Heating degree-days are deviations of the mean daily temperature below 65°F. For example, if a weather station recorded a mean daily temperature of 78°F, cooling degree-days for that station would be 13 (and heating degree-days, 0). A weather station recording a mean daily temperature of 40°F would report 25 heating degree-days (and 0 cooling degree-days).

There are two degree-day data bases maintained by the National Oceanic and Atmospheric Administration. Weekly degree-day information is based on mean daily temperatures recorded at about 200 major weather stations around the country. Monthly data are based on readings at more than 8,000 weather stations. The temperature information recorded at these weather stations is used to calculate statewide degree-day averages based on population. The State figures are then aggregated into Petroleum Administration for Defense (PAD) Districts and into the national average, also using a population weighting method.

Weekly weather reports are available much sooner than the monthly reports, and therefore the degree-day information published in the *Monthly Energy Review* is normally derived from the weekly source.

13. The U.S. Department of Energy Regions are defined as follows:

- Region 1—Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island;
- Region 2—New York, New Jersey, Puerto Rico, Virgin Islands;
- Region 3—Pennsylvania, Maryland, West Virginia, Virginia, District of Columbia, Delaware;
- Region 4—Kentucky, Tennessee, North Carolina, South Carolina, Mississippi, Alabama, Georgia, Florida, Canal Zone;
- Region 5—Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio;

Region 6—Texas, New Mexico, Oklahoma, Arkansas, Louisiana;

Region 7—Kansas, Missouri, Iowa, Nebraska;

Region 8—Montana, North Dakota, South Dakota, Wyoming, Utah, Colorado;

Region 9—California, Nevada, Arizona, Hawaii, Trust Territory of the Pacific Islands, American Samoa, Guam;

Region 10—Washington, Oregon, Idaho, Alaska.

14. Prior to January 1975, diesel fuel prices were obtained from retail gasoline dealers that also sold diesel fuel. Beginning in January 1975, the diesel fuel survey was expanded to include selected truckstops plus additional retail gasoline dealers that sold diesel fuel. Selling price estimates are based on a survey of 31 cities. Margins are based on a survey of 10 cities.

15. Prior to February 1976, the domestic crude petroleum wellhead price represented an estimate of the average of posted prices; after February 1976, the wellhead price represents an average of first sale prices. For the 2-year period January 1974 through January 1976, the old oil price at the wellhead was originally estimated to be \$5.25 per barrel based on representative postings. This estimate was revised in July 1976 after a survey of crude oil purchasers was implemented and more complete data became available. Estimates of the average old oil price given in the table for months prior to February 1976 are based on prices for old oil reported on new oil leases, and were not derived from a statistically valid sample of old oil leases.

16. The refiner acquisition cost of domestic crude petroleum is the price paid by refiners for domestic crude petroleum, unfinished oils, and natural gas liquids and includes transportation costs from the wellhead to the refinery. The refiner acquisition cost of imported crude petroleum is the average landed cost of imported crude petroleum to the refiner and represents the amount which may be passed on to the consumer. It incorporates transportation costs and fees (including the supplemental import fees) and any other costs incurred in purchasing and shipping crude oil to the United States.

17. The estimated landed cost of imported crude petroleum from selected countries does not represent the total cost of all imported crude. Prior to March 1975, imported crude costs to U.S. company-owned refineries in the Caribbean were not included in the landed cost, and costs of crude petroleum from countries which export only small amounts to the United States were also excluded. Beginning in March 1975, however, coverage was expanded to include U.S. company-owned refineries in the Caribbean. Landed costs do not include supplemental fees.

18. FOB literally means "Free on Board." It denotes a transaction whereby the seller makes the product available with an agreement on a given port at a given price; it is the responsibility of the buyer to arrange for the transportation and insurance.

19. The weighted average utility fuel cost for the total United States includes distillate fuel oil delivered to utilities whereas the regional breakdown for residual fuel oil prices represents only No. 6 fuel oil prices.

Units of Measure

Weight

1 metric ton	<i>contains</i>	1,000 kilograms or 2,204.62 pounds
1 long ton	<i>contains</i>	2,240 pounds
1 short ton	<i>contains</i>	2,000 pounds

Conversion Factors for Crude Oil

1 barrel	<i>contains</i>	42 gallons
1 barrel	<i>weighs</i>	0.136 metric tons (0.150 short tons)
1 metric ton	<i>contains</i>	7.33 barrels
1 short ton	<i>contains</i>	6.65 barrels

Conversion Factors for Uranium

1 short ton (U ₃ O ₈)	<i>contains</i>	0.769 metric tons of uranium
1 short ton (UF ₆)	<i>contains</i>	0.613 metric tons of uranium
1 metric ton (UF ₆)	<i>contains</i>	0.676 metric tons of uranium

Approximate Heat Content of Various Fuels

		1972	1973	1974	1975	1976	1977-78
Bituminous coal and lignite							
Production	Btu/short ton	24,050,000	24,010,000	23,730,000	23,200,000	23,150,000	22,900,000
Consumption	Btu/short ton	23,750,000	23,650,000	23,070,000	22,800,000	22,750,000	22,550,000
Anthracite	Btu/short ton	25,400,000	25,400,000	25,400,000	25,400,000	25,400,000	25,400,000
Crude petroleum, production	Btu/barrel	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000	5,800,000
Petroleum products,							
consumption, average	Btu/barrel	5,503,200	5,517,000	5,506,100	5,495,900	5,495,900	5,495,900
Natural gas liquids	Btu/barrel	4,049,256	4,032,483	4,024,000	3,997,000	3,997,000	3,997,000
Natural gas, wet	Btu/cubic foot	1,100	1,093	1,097	1,095	1,094	1,094
Natural gas, dry	Btu/cubic foot	1,027	1,021	1,024	1,021	1,020	1,020
Hydropower	Btu/kWh	10,379	10,389	10,442	10,406	10,406	10,406
Nuclear Power	Btu/kWh	10,660	10,660	10,660	10,660	10,660	10,660
Petroleum Products:	Btu/barrel						
Natural gasoline		4,620,000					
Liquefied gases		4,011,000					
Gasoline (incl. aviation)		5,248,000					
Special naphtha		5,248,000					
Jet fuel, naphtha-type		5,355,000					
Jet fuel, kerosene-type		5,670,000					
Kerosene		5,670,000					
Distillate fuel oil		5,825,000					
Residual fuel oil		6,287,000					
Still gas		6,000,000					
Lubricants		6,065,000					
Waxes		5,537,000					
Petroleum coke		6,024,000					
Asphalt and road oil		6,636,000					

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